

**Our Ref./Docket No: ESKO-037**

**APPENDIX:**  
**Score!X**  
**Training Manual and User Guide**



# **SCORE! X**

## **Training Manual and User Guide**

---



©2002 Dimensional CAD/CAM Systems, Inc. 16000 Ventura Blvd., Ste. 910, Encino, CA 91436  
Phone (818) 379-7039 - Fax (818) 379-7041

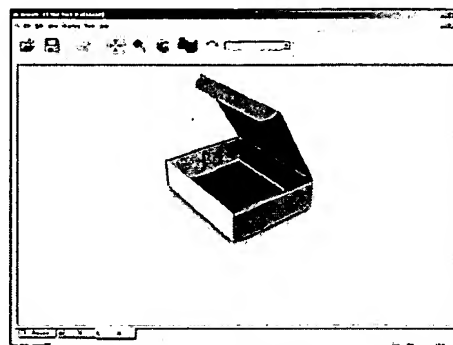
## Table of Contents

<b>Score! X Product Overview</b> .....	3
<b>Score! X Work Environment</b> .....	4
Preview .....	4
2-D.....	5
3-D.....	6
<b>Quick Start Tutorial</b> .....	7
2-D Design .....	7
Preview Tab .....	7
2-D Tab.....	10
Beginner's Note .....	10
Resizing Selected Designs .....	11
Placing Graphics on 2-D Designs .....	12
2-D Tab Section Graphics.....	13
Resizing Simple Graphics .....	15
Loading Full-Size Graphics .....	15
Fold Up with Graphics.....	18
Communicating 3-D Design to Outside User.....	21
<b>Menus</b> .....	24
File .....	24
Edit .....	33
View .....	36
Graphics.....	43
Tools .....	46
Help.....	49
<b>Appendix</b> .....	51
Import/Export Formats .....	51
Creating Score! X Standards with Fold Order in Score! CAD ..	53
Creating Preview Images on Score! X .....	57
Changing VET Size in HTML Browser .....	64
Saving a Viewpoint Media File for HTML .....	64
Saving a Score! X HPGL File for Sample Tables .....	66
<b>System Requirements</b> .....	69

# Score! X Product Overview

Dimensional Impressions, creators of the award-winning Score! CAD family of carton packaging design software, is proud to introduce Score! X.

**Score! X** is new software for the Packaging Industry that revolutionizes the creation of carton designs, allowing them to be folded up in 3-D and even 3-D with graphics. It is unique in its ability to bring powerful 2-D and 3-D graphical carton design tools to traditionally non-CAD users. Users can be productive in a minimal amount of time and require no structural or graphics experience.



Score! X has extensive libraries of Corrugated and Folding Carton designs. Designs range from Standard Styles to Industrial and Inner Packing to POP and Display designs. It also includes many translators to import and export designs in both 2-D and 3-D formats. Many of these translators are available to the industry for the first time. The most unique feature is the software's ability to create a design that folds up with graphics, and can then be exported out and e-mailed to a customer or to whomever else the design needs to be communicated. This file may be opened, folded up and rotated in the user's Web Browser with no special programs needed.

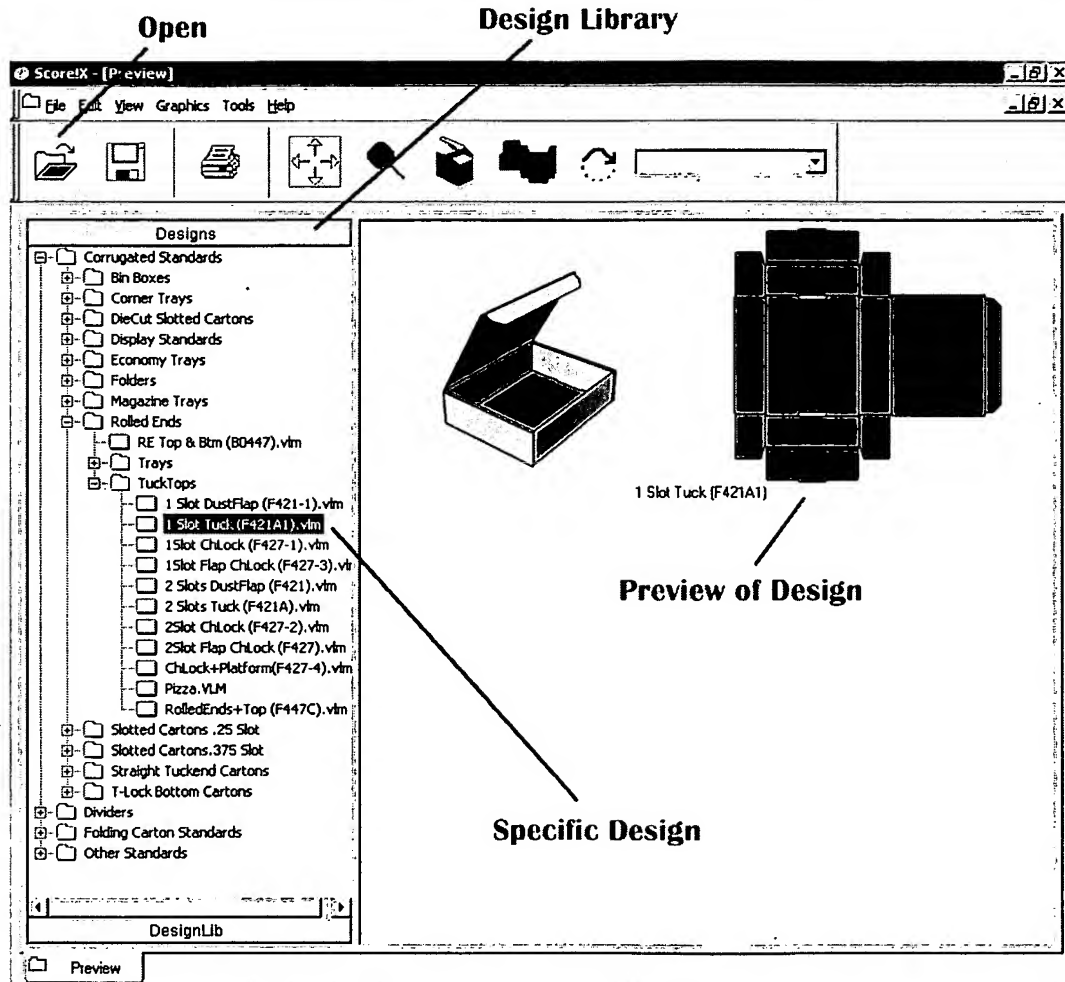
This manual will walk the Score! X user through all aspects of the program. After covering installation, the quick start guide will take the user through a complete Score! X design cycle of choosing a design, resizing it, adding the graphics overlay and then folding the design up. Then the main features of the program: 2-D design, fold up, fold up with graphics and communicating finished 2-D and 3-D designs will be covered to make the user productive. Then all menus will be covered in their entirety with detailed examples. The appendix sections will cover all the import and export formats and suggestions of which formats are best used in certain situations.



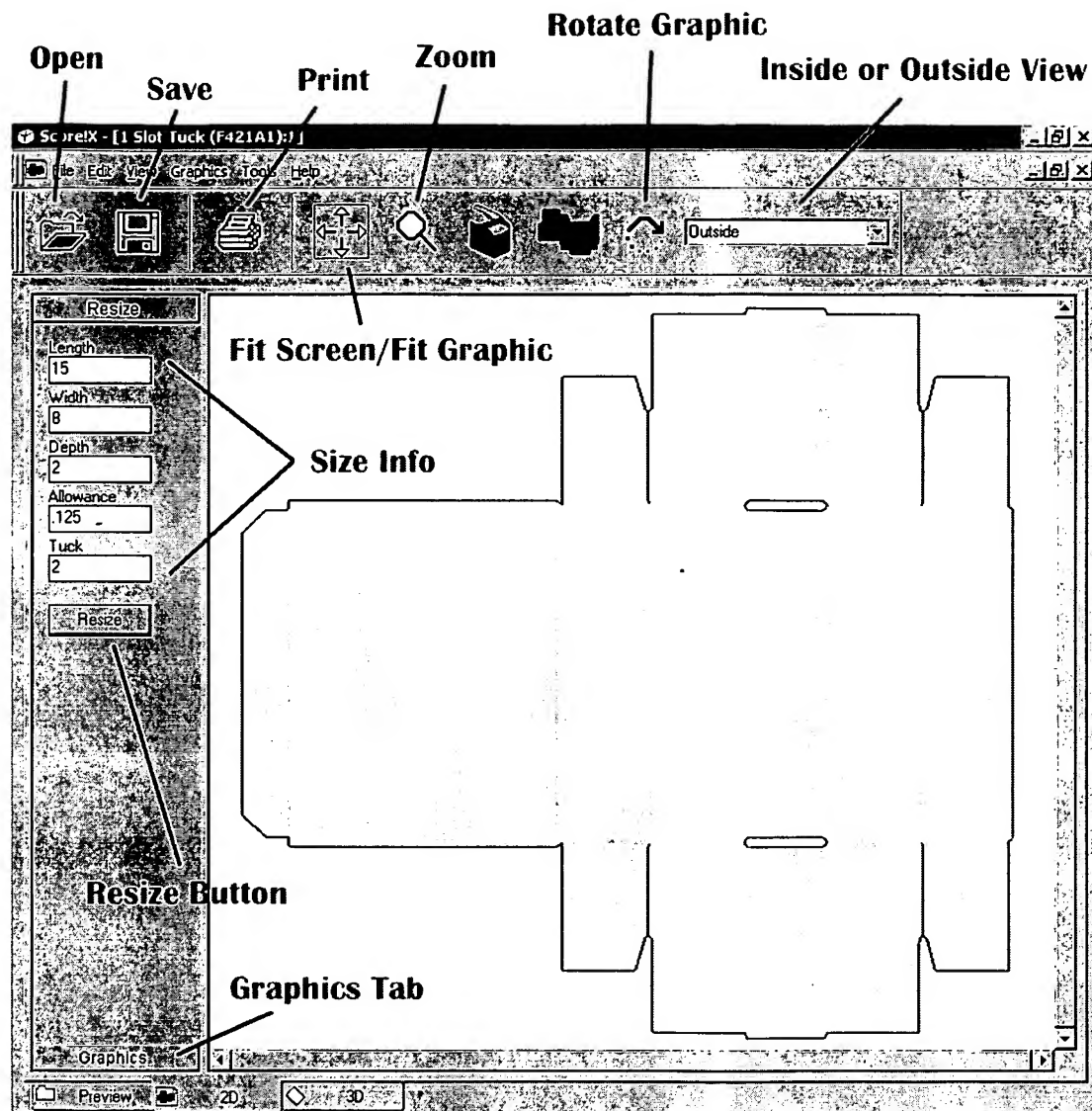
There are certain items that are very important to the use of the program or there may be shortcuts to reduce steps. These items will be made aware to the user by the Score! X Tip logo. Look for the Tip icon for valuable advice to maximize the full potential of Score! X's awesome power.

# Score! X Work Environment

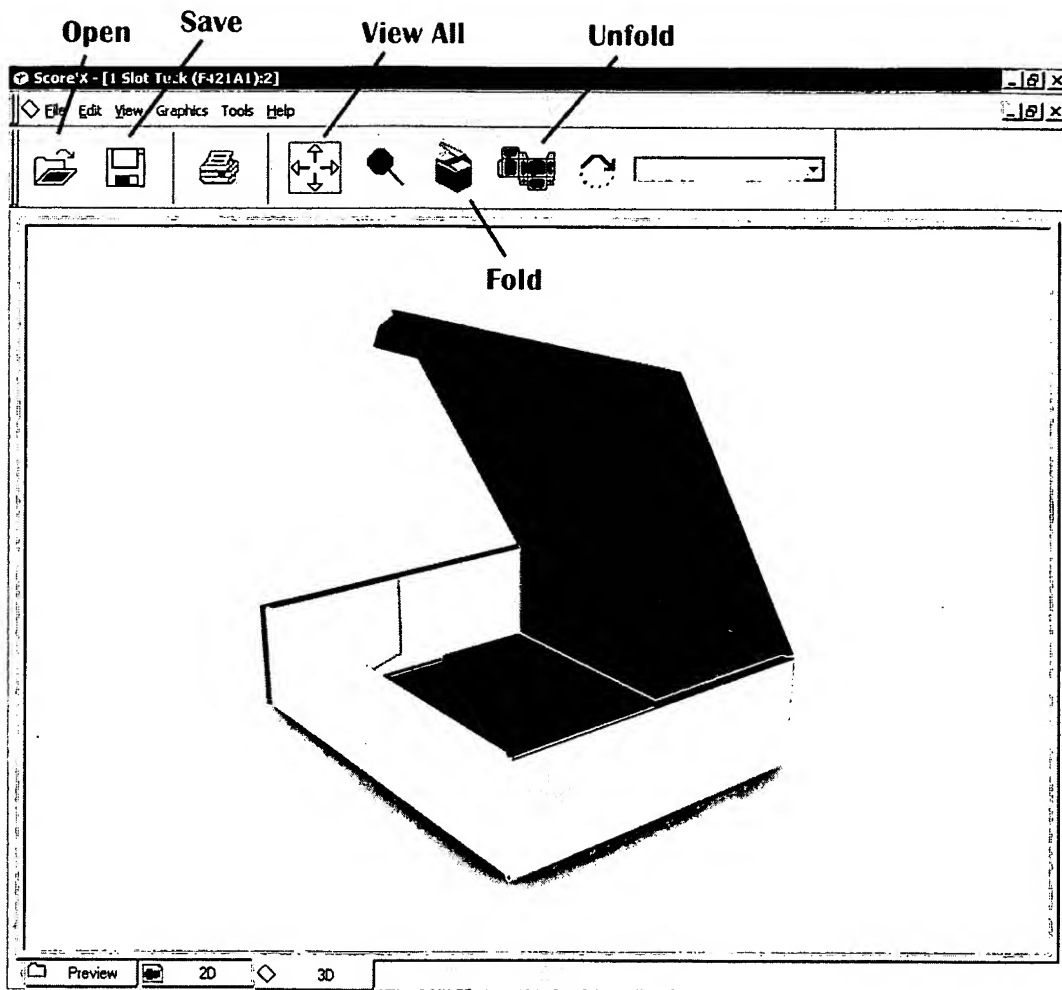
## Preview Tab Environment



## 2-D Tab Environment



## 3D Tab Environment



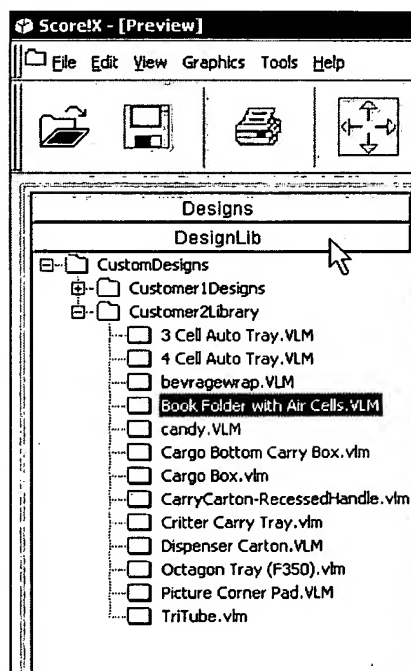
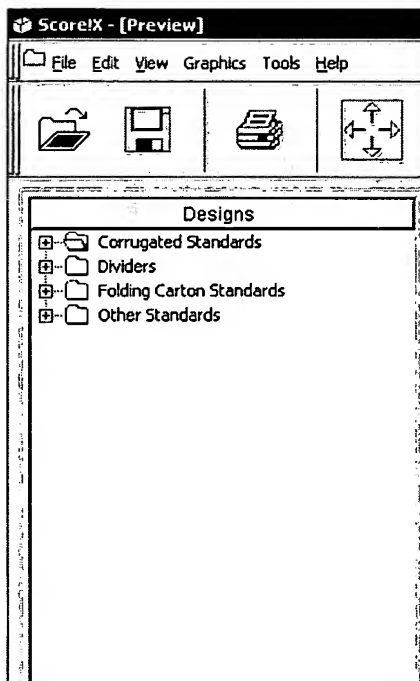
# Quick Start Tutorial

This Quick Start tutorial is designed to highlight the most important and most frequently used features of Score! X. It will demonstrate the key functions of Score! X, which include the selection and resizing of 2-D designs, and folding up designs with and without graphics. The guide will also show how the finished 2-D and 3-D designs can be communicated to different software programs and output devices.

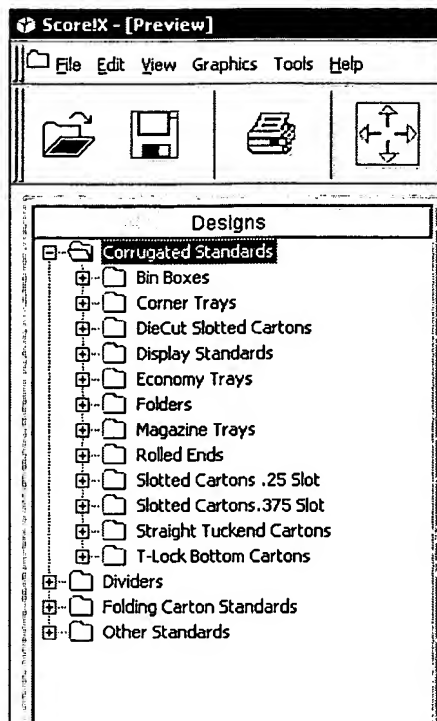
## 2-D Design

### Preview Tab

The first step in working with the 2-D design is picking a "Standard" carton style out of the Score! X library of designs. These designs, which were shipped with Score! X, are listed under the *Designs* button and are broken down into separate sections: *Corrugated*, *Dividers*, *Folding Carton*, and *Other Standards*. Clicking any of the plus signs will expand the directories. At the bottom of the window, there is a *DesignLib* button. Clicking this displays custom libraries set up by the user (see Appendix 2).



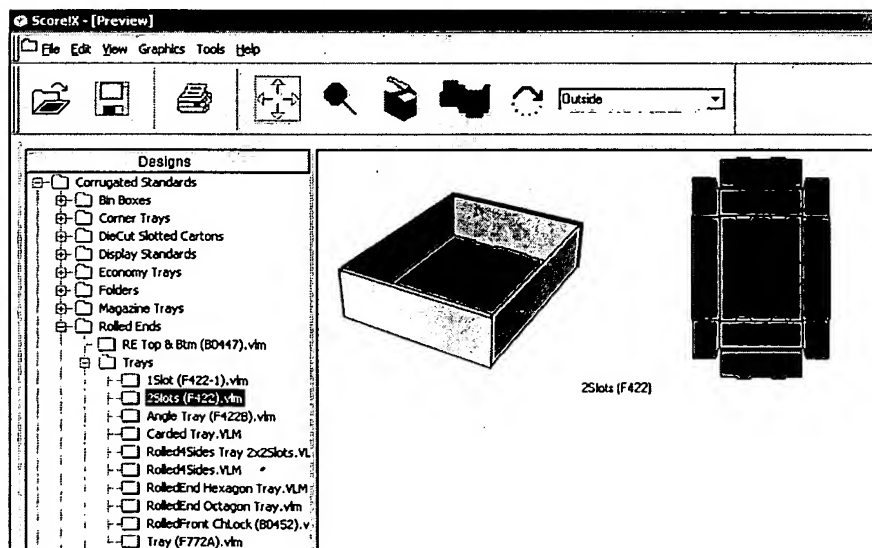




The library covers many styles; the naming conventions used are common American names. Many of the styles are the same as FEFCO styles. If a style corresponds to a FEFCO style, both the US number and the FEFCO number are used.

For this tutorial, click the *Designs* button and expand *Corrugated Standards* → *Rolled Ends*.

Next, click *Trays*, and then the individual file *2Slots (F422).vlm*.

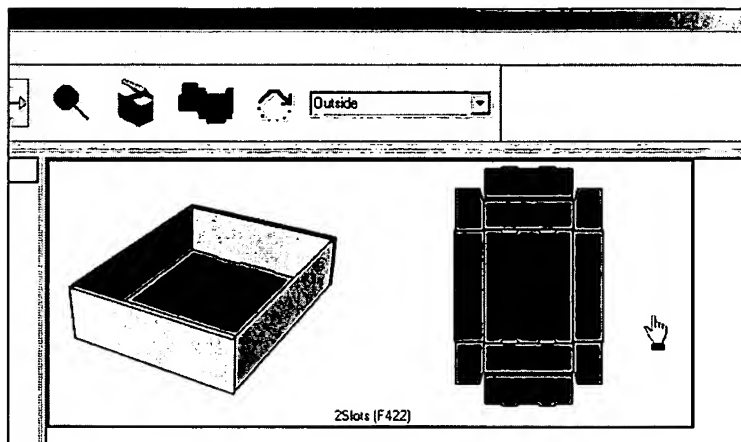


Whenever an individual file is selected, Score! X will display a preview of the carton in both a 2-D flat and 3-D view to the right of the library. If the mouse is moved over and placed on the preview, Score! X will activate the preview with a blue box, and the cursor changes to a Web-type selection cursor. For the tutorial, this design will be used. Click with the mouse on the preview.



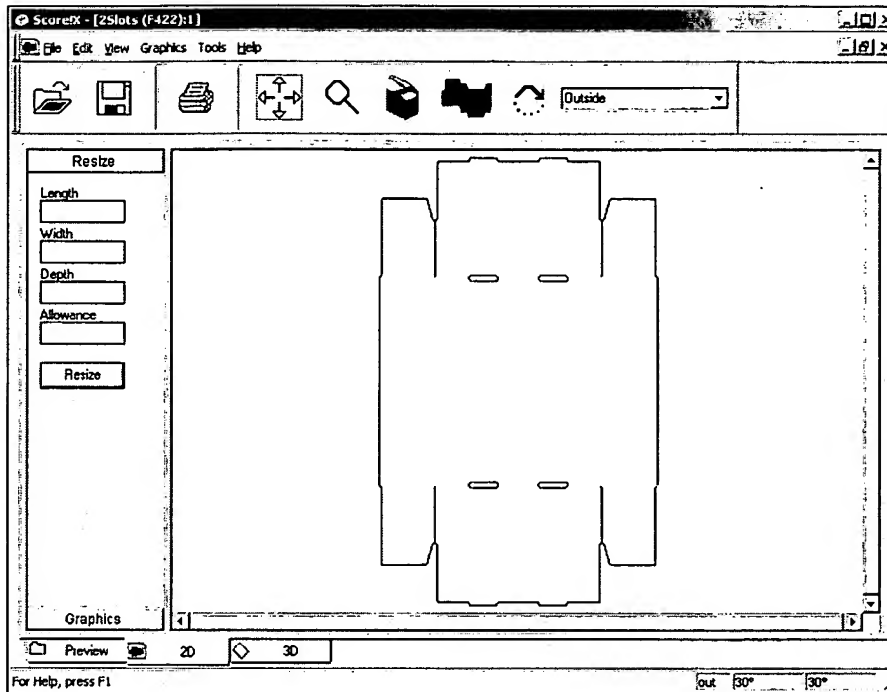
Styles may also be selected by double-clicking on the file name in the library directory.

Score! X has now automatically taken the selected design from the library and activated the 2-D tab section of the program.



## 2-D Tab

The Score! X working environment has now changed. The left pane has switched from the library of carton designs to the *Resize* and *Graphics* button. The right pane now shows a larger 2-D flat view of the selected carton.



## Beginner's Note

The standard way of specifying out the size of a carton for manufacturing in the carton industry is LWD in inside dimensions. Another way of saying this is that size dimensions for a carton are specified as the *working inside* dimensions that a carton needs to hold something of a given size. If a 10x10x10 cube of a material needs to be packaged then its specification for the carton's inside Length, Width and Depth are 10x10x10. When the carton is folded up and measured, the outside of the box will be larger but the space inside should equal 10x10x10. For users without a lot of carton design experience, most designers would make the internal dimensions for the above example a little bit larger so that the cube has room to be "dropped in" to the finished carton.

Also, many designs - especially for corrugated - change the "Allowances" for manufacturing based on the material that is used. This is due to the thickness of the substrate being manufactured. If the same structural design for a corrugated carton made in E flute is then used and manufactured out of B/C flute or Double Wall, the carton will not fold up or function properly.

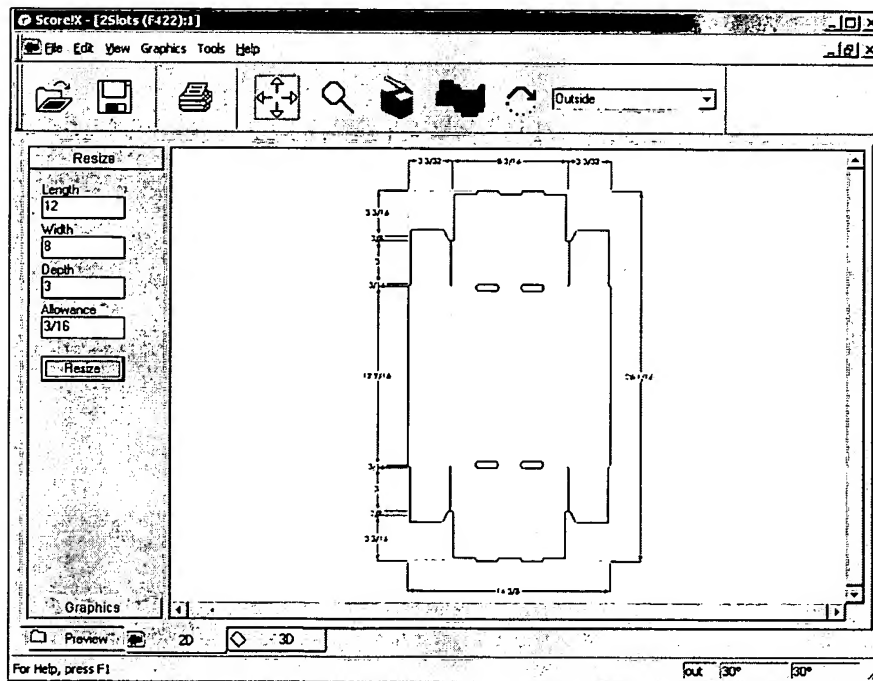
This is because the nominal thickness of E flute is 1/16 of an inch and Double Wall can be 1/4 to 5/16 of an inch. The following chart shows the most commonly used allowance values for different values of corrugated:

F or Micro Flutes	1/32	.03125
E Flute	1/16	.0625
B Flute	1/8	.125
C Flute	3/16	.1875
B/C Flute or Double Wall	1/4 or 5/16	.25 or .3125

### Resizing Selected Designs

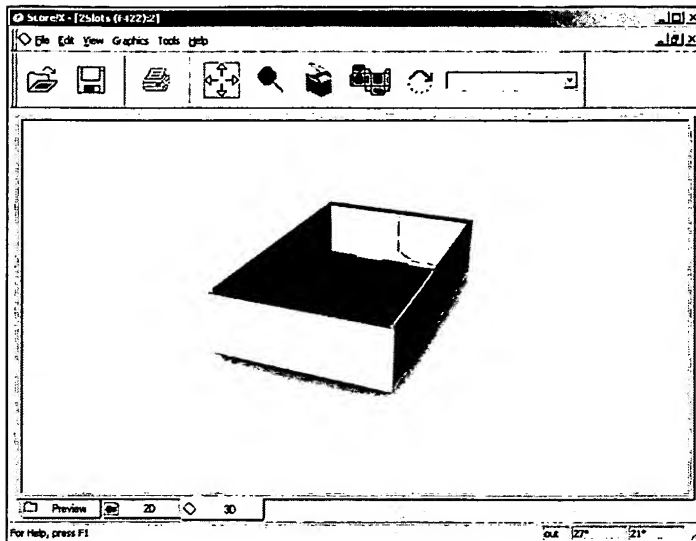
Score! X is now ready to resize this design. All of the *Standards* are set up to take internal dimension sizes, or "ID."

In the *Resize* pane on the left, enter values of: Length=12, Width=8, Depth=3, and Allowance= 3/16 (the allowance value for C flute). Then hit the *Resize* button.



Score! X will now resize the design and add dimensions. This 2-D design is now ready to be saved in a CAD or Graphics format to be opened in other programs, or saved in an HPGL format to be cut out on a sample table (see section on saving).

As a quick preview for what is to come, click the 3-D tab at the bottom, and Score! X will automatically fold up this design in 3-D space.



Clicking on the *Fold* and *Unfold* buttons on the toolbar will make the design fold up and down. After trying that a few times, click again on the 2-D tab to make the 2-D section of Score! X active again.

### **Placing Graphics on 2-D Designs**

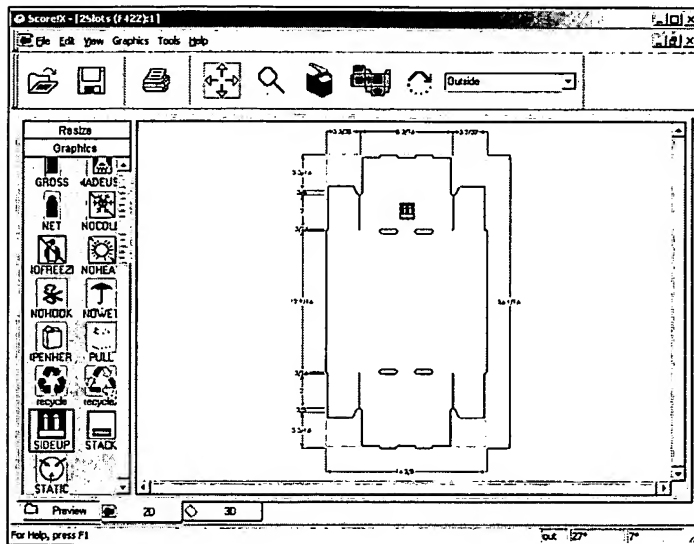
There are two ways of placing graphics on designs in Score! X. One is using the *Graphics* button on the 2-D section for simple graphics, and the second is using the *Graphics* menu to load full-size graphic layouts that were designed specifically for a given carton.

## 2-D Tab Section Graphics

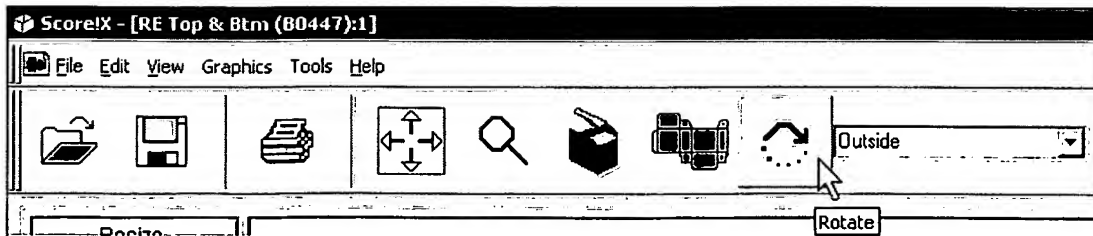
In the 2-D section there is the *Resize* button used in the previous section. At the bottom of the pane there is also a *Graphics* button. Click on *Graphics*. The pane on the left now shows a library of simple graphical designs commonly used on cartons. Look to the bottom for the graphic called *Side Up*. Click with the mouse and drag the logo to the top middle flap.



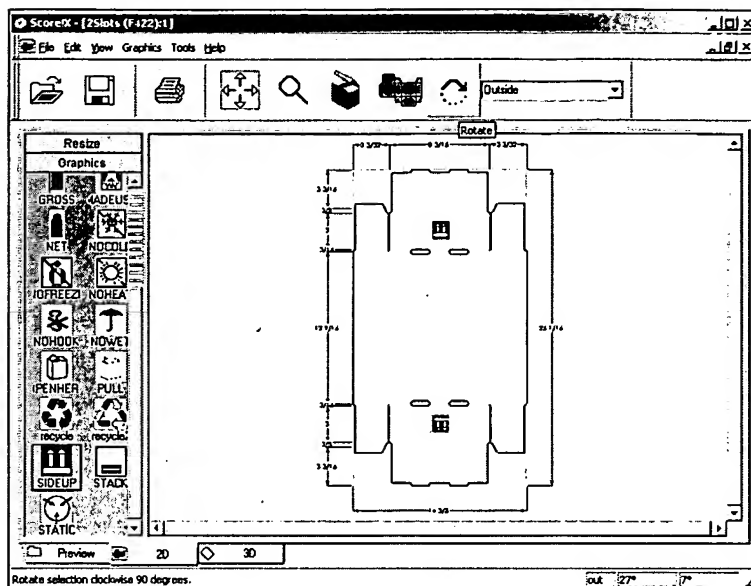
The position of the graphic may be fine-tuned by using the left/right and up/down arrow keys on the keyboard.



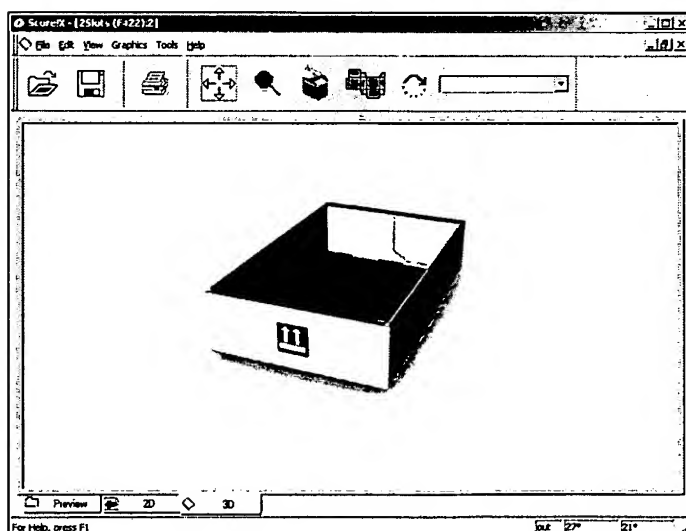
Next, click and drag the same graphic to the corresponding panel on the bottom of the carton. In this location the graphic will look upside-down once the carton is folded up. To rotate the graphic, click the *Rotate* button on the toolbar.



Clicking rotates the graphic in 90-degree increments. Click the button twice so that the arrows point down.



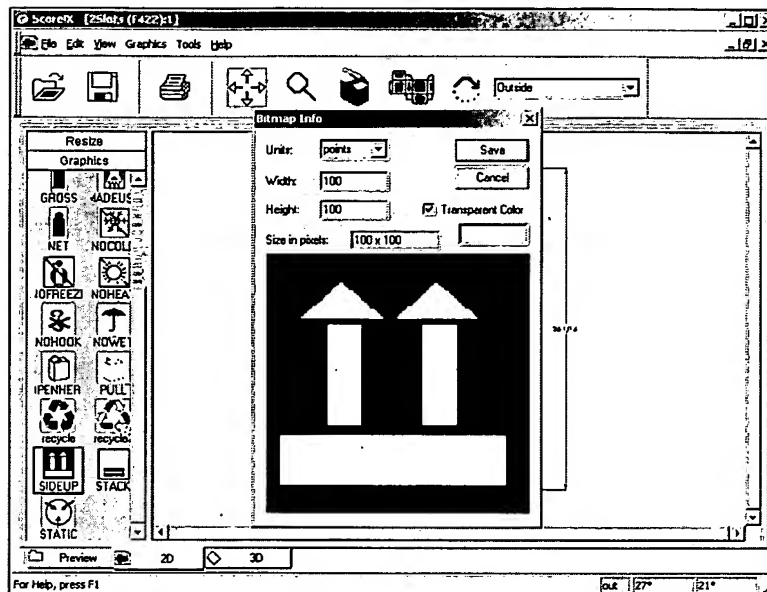
For a quick peek at this design in 3-D space, click the 3-D tab at the bottom and Score! X will automatically fold up this design in 3-D space. Hitting the *Fold* and *Unfold* buttons on the toolbar will make the design fold up and down. Clicking and holding the mouse button down and moving the mouse will make the carton spin in space.



After manipulating the carton, click again on the 2-D tab to make the 2-D section of Score! X active again.

## Resizing Simple Graphics

If one of the graphics looks too large or small for a design, double-click on it and a window will come up displaying the size of the graphic. The numbers and units may be changed up or down to make a new size of the graphic. To save the new size as a default every time Score! X starts, hit the Save button.



## Loading Full-Size Graphics

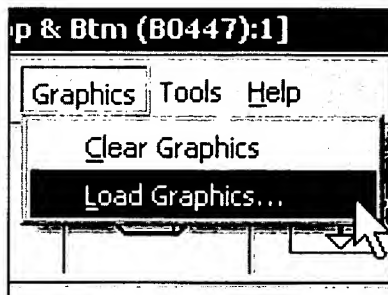
Score! X will allow users to save a resized design in a CAD or Graphics format. This file may then be used as a template to create the full-size graphical layout. These full-size graphics are loaded through the *Graphics* menu.

If the *Side Up* graphics are still on the design, go to the *Graphics* menu and then select *Clear Graphics*. This deletes any graphics placed on a design.

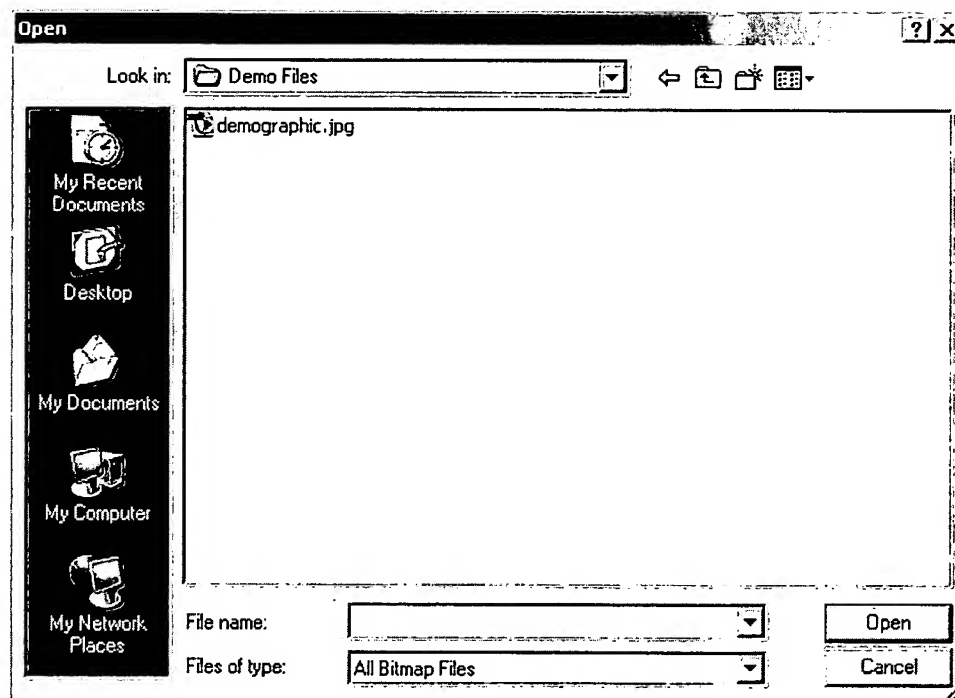




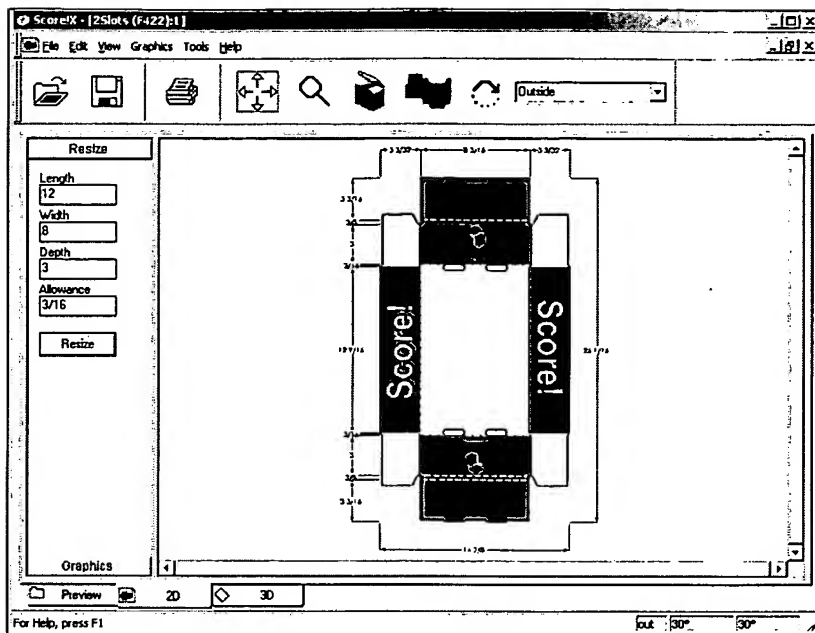
To load a demonstration graphic file that has been prepared, go to the *Graphics* menu and select *Load Graphics*.



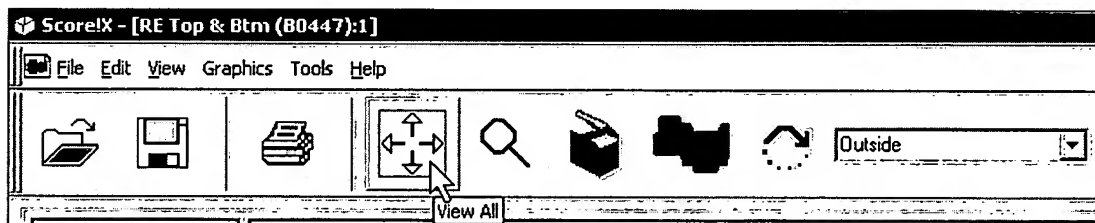
Score! X will open a standard Windows *Open* dialogue box.



In the *Files of Type* drop-down menu, select JPEG and then go to where Score! X is stored. The default is C:\Program Files\Dimensional Impressions\Score! X\Demo Files. Located within the *Score! X* folder is the *Demo Files* folder – find the file **demographic.jpeg**. Select this file and click the *Open* button. Score! X will now place the graphic over the design.

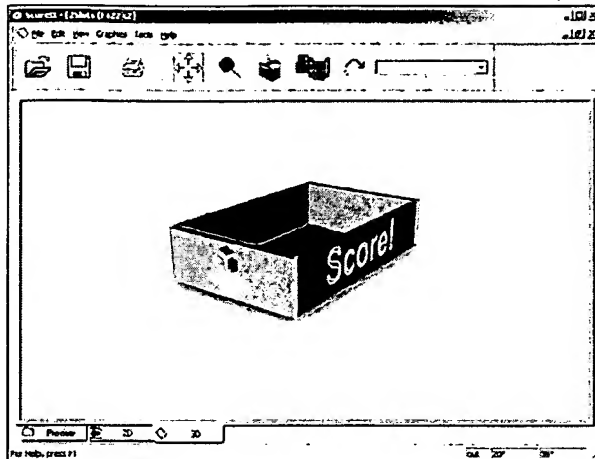


If the graphic does not fit the design, hit the *View All* button on the toolbar. This will stretch the graphic to cover the design.

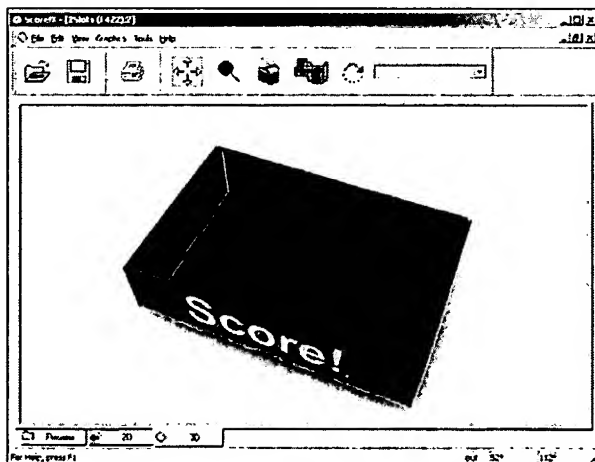


## Fold Up with Graphics

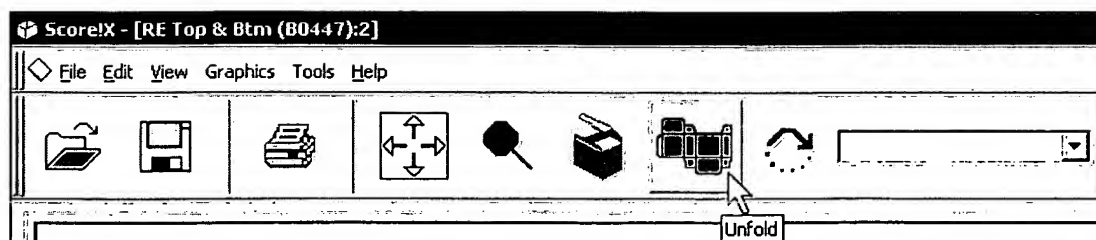
Now that graphics are on the carton, hit the 3-D tab and Score! X will automatically go into the 3-D workspace.



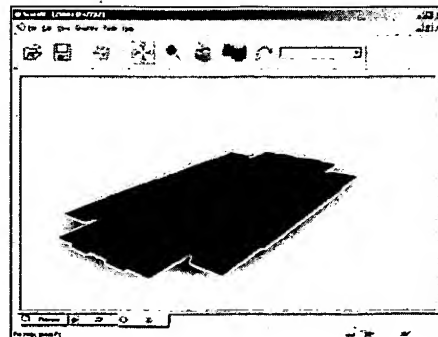
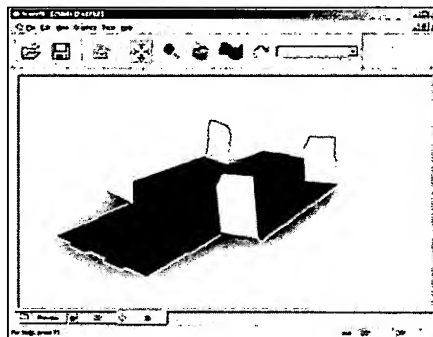
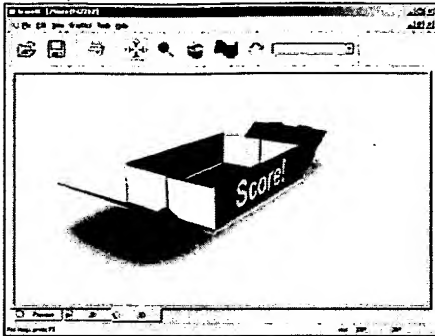
Just as in the previous sections, holding down the mouse button and dragging the mouse makes the carton rotate.



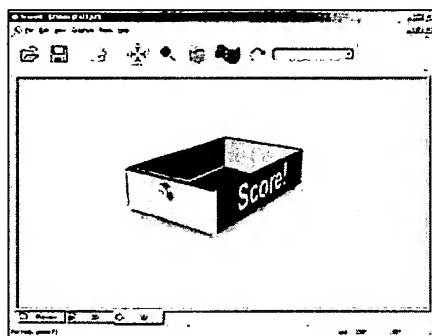
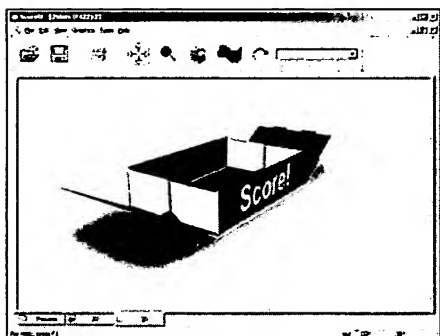
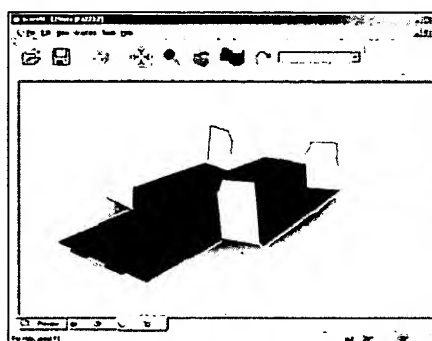
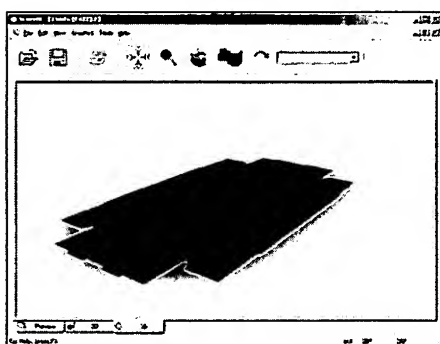
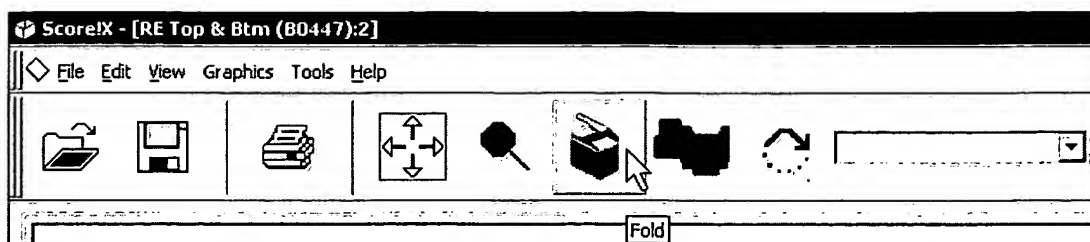
Hit the *Unfold* button on the toolbar.



The design will now unfold.



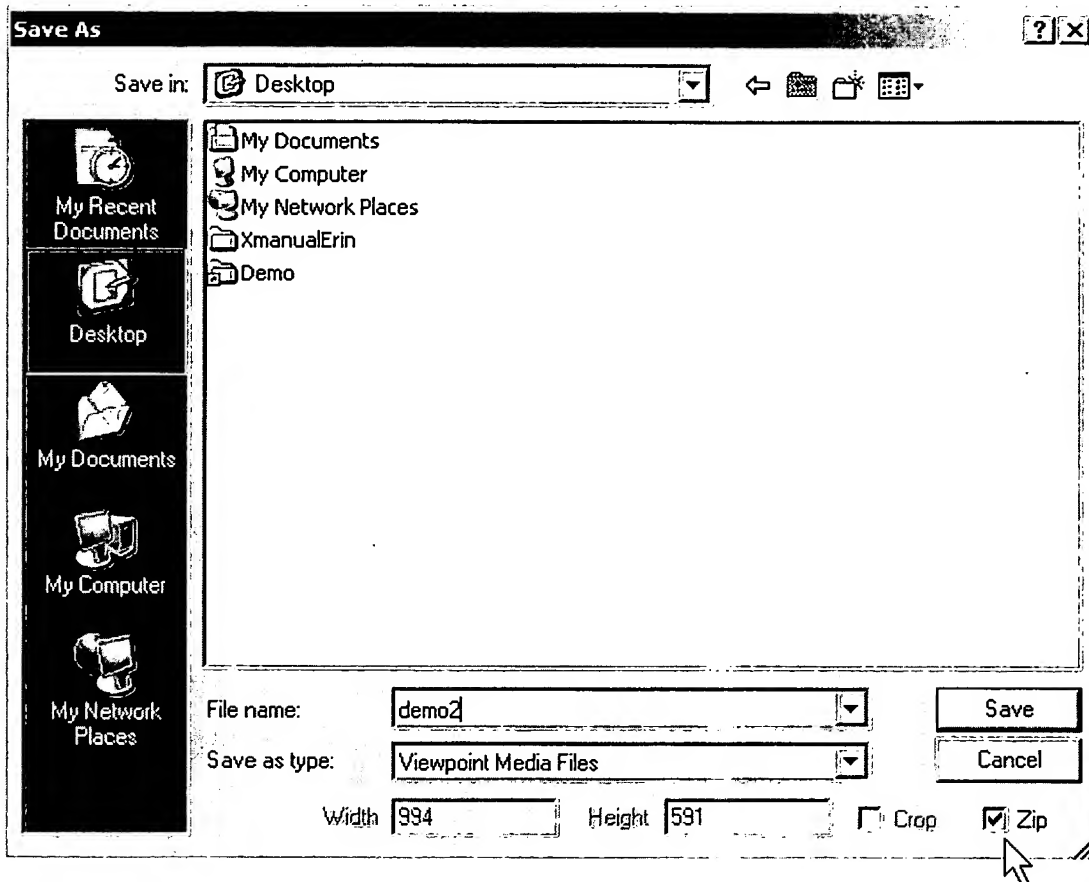
Hit the *Fold* button on the toolbar and Score! X will fold the design back up.



Mouse Tips: Hold down *Control* + *Alt* and use the mouse for fast zooming. Combine the mouse with *Control* only for a slower zoom, and the *Shift* key to move the image on the screen.

## Communicating 3-D Design to User without Score! X

3-D designs from Score! X may be sent to other people who may not have a copy of Score! X. These may be Score! X designs with or without graphics. The only requirement is that the receiving user has access to a Web browser such as Internet Explorer or Netscape. To send a file to be opened in a browser follow these steps:

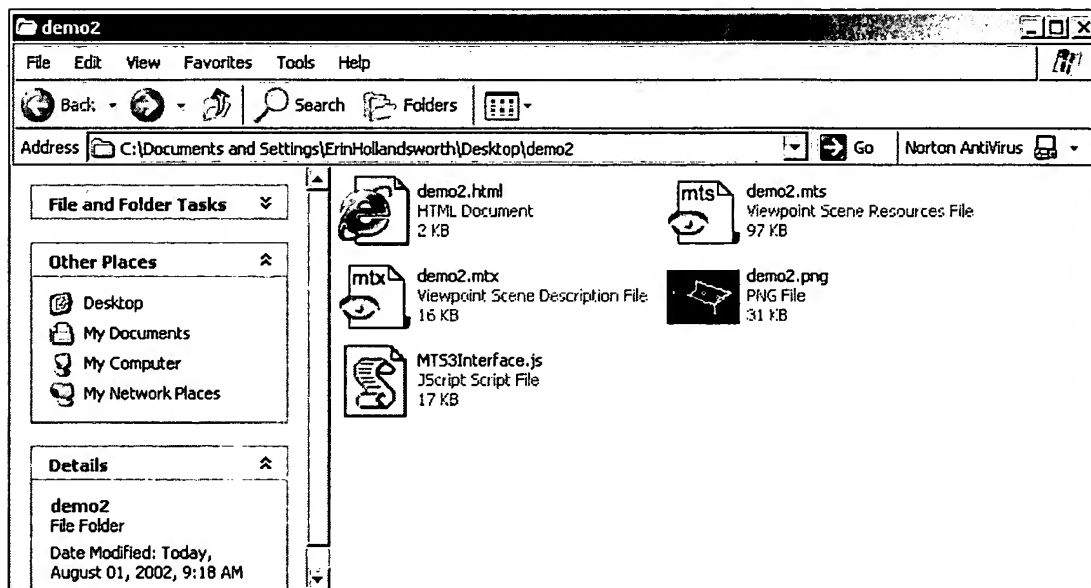


Use the file from the last section with the graphic *demographic.jpg* loaded on to it. Rotate the carton to the desired angle. Go to *File* → *Save As*. A standard Windows *Save As* dialogue box will appear. In *File Type* select *Viewpoint Media File*. Make sure to check the box in the lower right-hand corner labeled *Zip*. In this example, the file was saved to the desktop as *demo2* and its file name becomes *demo2.zip*.

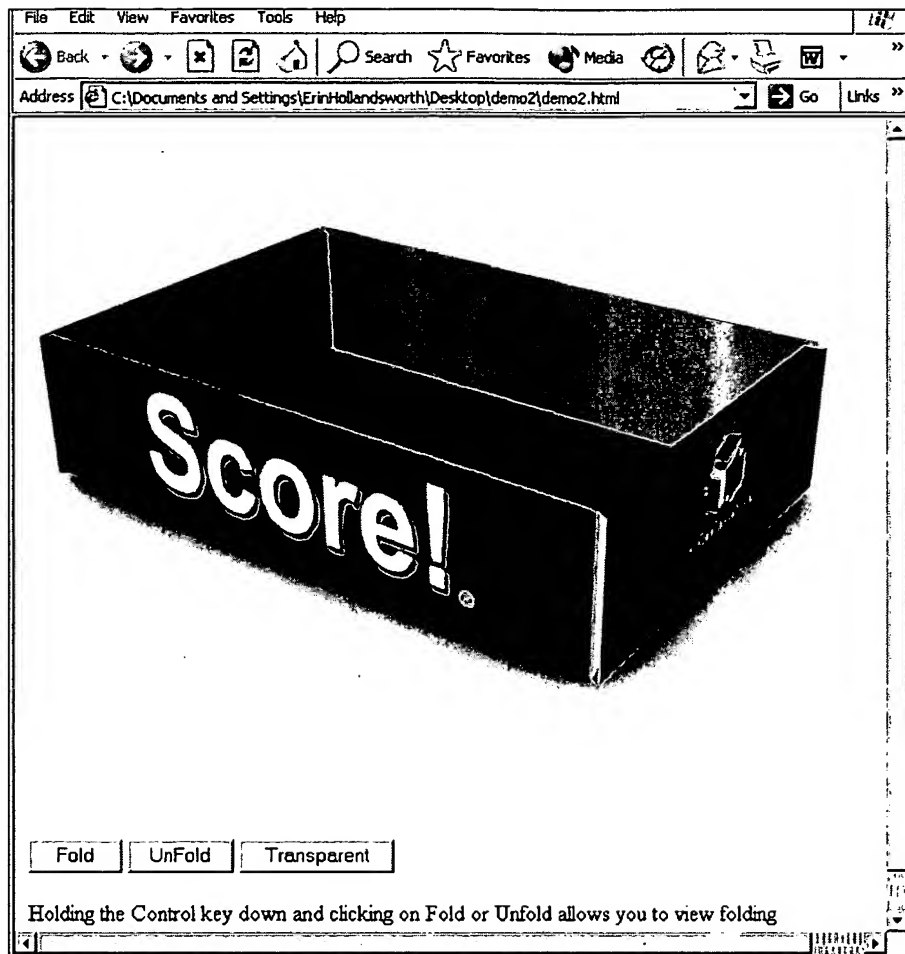


A Zip file is a compressed file commonly used to send a file or a group of files across e-mail. When the end user of the file receives the "Zipped" file, he or she needs to "Unzip" it. Users of Windows XP have these features built into the operating system.

Other Windows OS users may need to download a shareware to their computer. There are many that uncompress or "Unzip" .zip files. The most common is a program called Winzip. For Macintosh users, Aladdin Systems, has a popular program called Stuffit and Stuffit Expander. These will "Unzip" a .zip file. Once the *demo2* file is "unzipped" it becomes a standard folder named *demo2*.



If this file is opened there should be five files inside. The user just needs to double-click the file *demo2.htm* (HTML file) or open it through the Web browser. The first time the end user opens the file, the browser may ask to load a plug-in needed to display the carton. Clicking *OK* will automatically load the plug-in and from then on, all Viewpoint files received from the Score! X user will open in the browser. Note: the end user must be connected to the Internet the first time opening the file so that the plug-in may be loaded if it is not already installed on that machine.



Once the browser opens up (in this example Microsoft Internet Explorer) the user may rotate, zoom in and zoom out as in Score! X. The user may also fold up and fold down the carton from within the browser. The *Transparent* button allows the user to see inside of the carton while it is folded up. This lets the user see any inserts or internal glued pieces that may be part of the design.



## File Menu

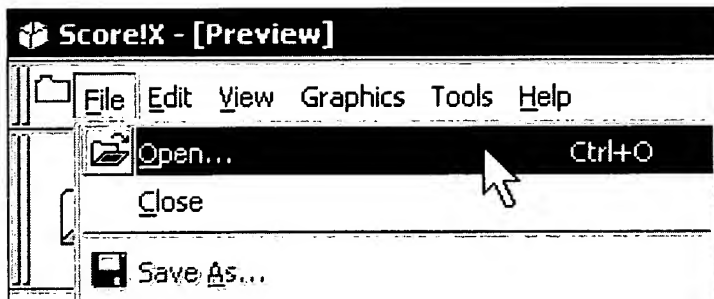
### Open

*File* → *Open* lets the user open files of different types. Usually this command is used to open files that are not in the *Standard Design Library*. These are designs that may have been resized for specific jobs and saved out into different directories. It is also used to open files of different formats. For example, files in the Vellum format are from the Score! CAD system, AutoCad® format opens the popular formats from the Autodesk suite of applications and DXF may be used as a generic opener of files from virtually any CAD system.

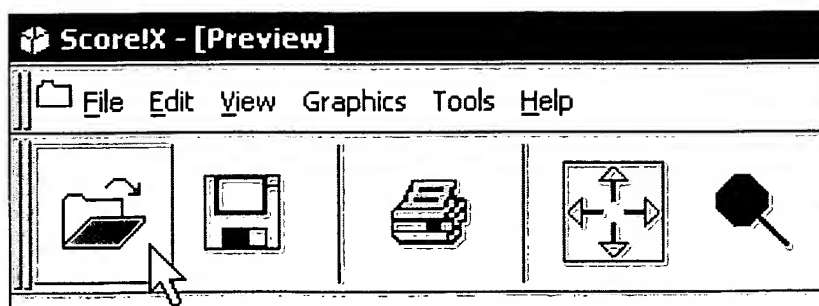


If receiving files from CAD users, know that Score! X is built for viewing 2-D CAD representations of Carton and Packaging designs. Let the sender of files know to send only the 2-D geometry in the files to be opened/imported.

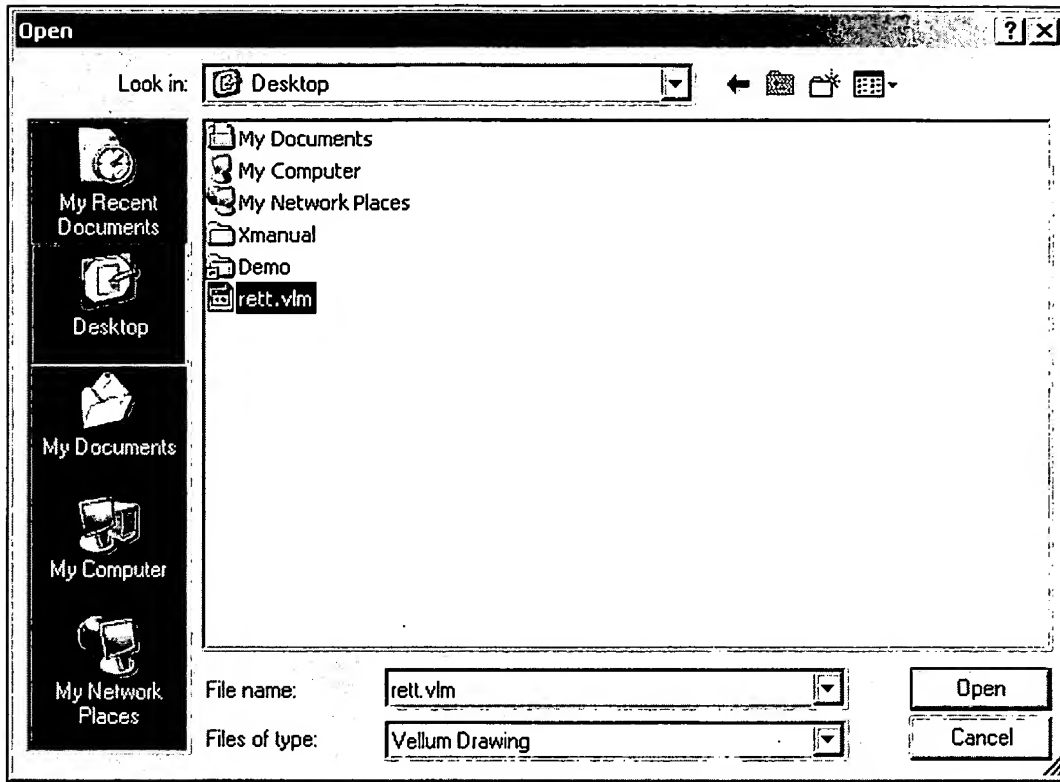
The *Open* command may be accessed from the File Menu...



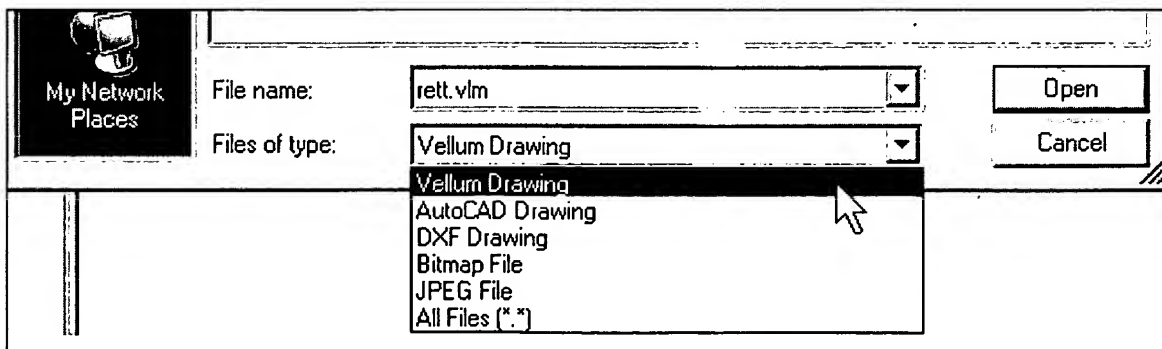
...or the Open button on the tool bar.



After hitting the Open command, a standard Windows dialogue box comes up. Navigate to the drives and directories where the file to be opened is located.



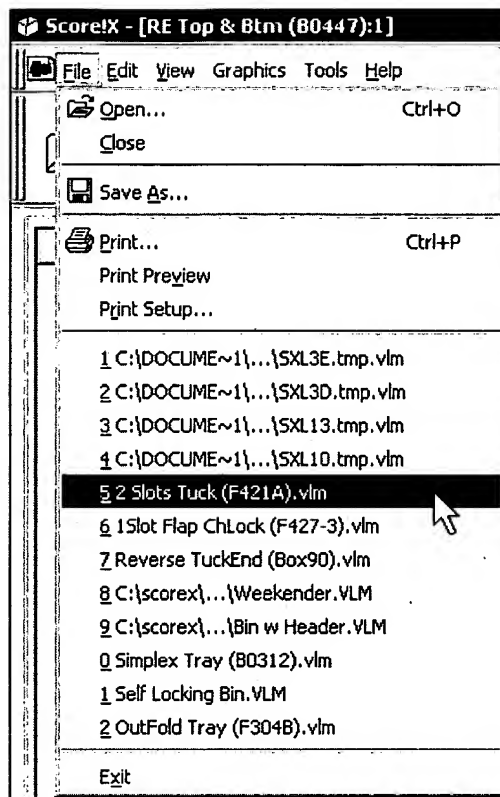
The default is Vellum or .VLM file format for files created from Score! CAD. Currently Score! X can only resize and fold up custom drawings that were created in Score! CAD. To open other file types, use the Files of Type button to choose different formats.



## **Import/Export Formats**

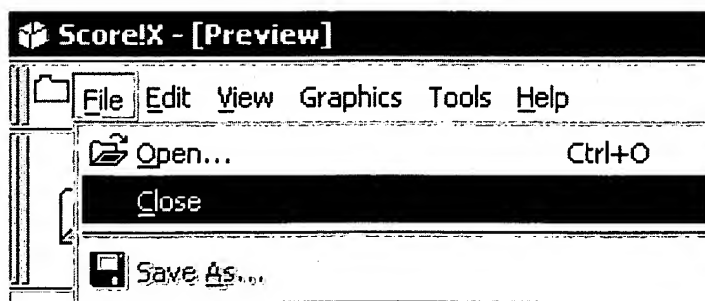
Open File	Extension	Notes
Score! / Vellum Drawing	.vlm	Created in Score! CAD or Score! X.
AutoCAD Drawing	.dwg	Created by AutoCAD, IntelliCAD, and other CAD systems.
AutoCAD Interchange	.dxf	Drawing interchange format; used to access the data stored in DWG files and to exchange drawing files between CAD programs.
Bitmap File	.bmp	Standard raster file for Windows.
JPEG File	.jpg	Joint Photographic Experts Group. Used for images on Web sites; glossy compression.

Once a drawing is selected, double click the file or hit the *Open* button. To open a file that was just worked on, use the *Recent File List* located at the bottom of the *File* menu.



## Close

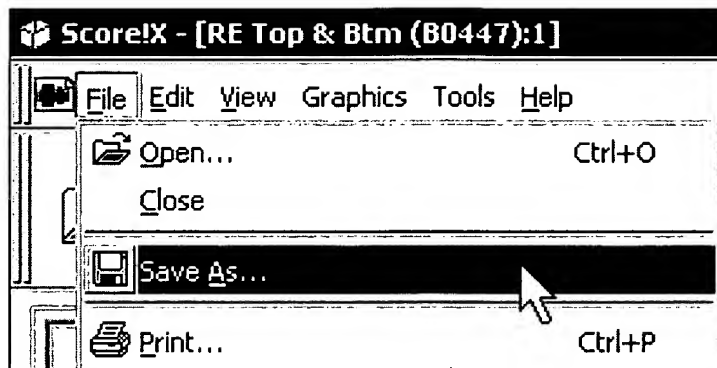
To close a file, use *File* → *Close* or the any of the standard Windows *Close* shortcuts.



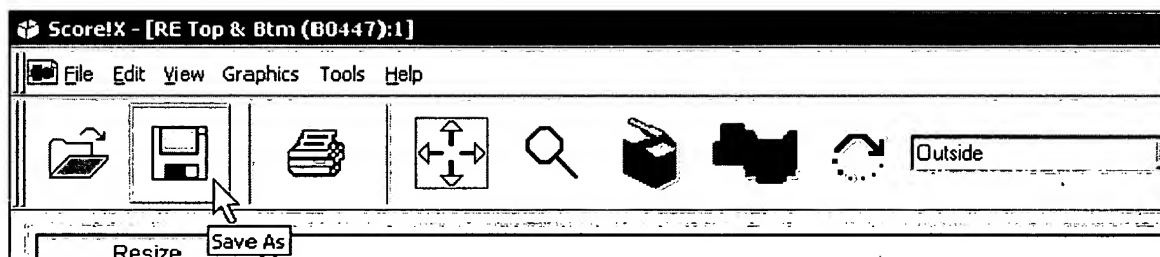
## Save As

The *Save As* option saves files in different formats. The default file format used in Score! X is Vellum or .vlm. This is the format for saving the 2-D structural data. Files may be saved in other 2-D CAD and graphics formats as well as interactive 3-D formats. A detailed list of formats follows, and is also located in Appendix 1.

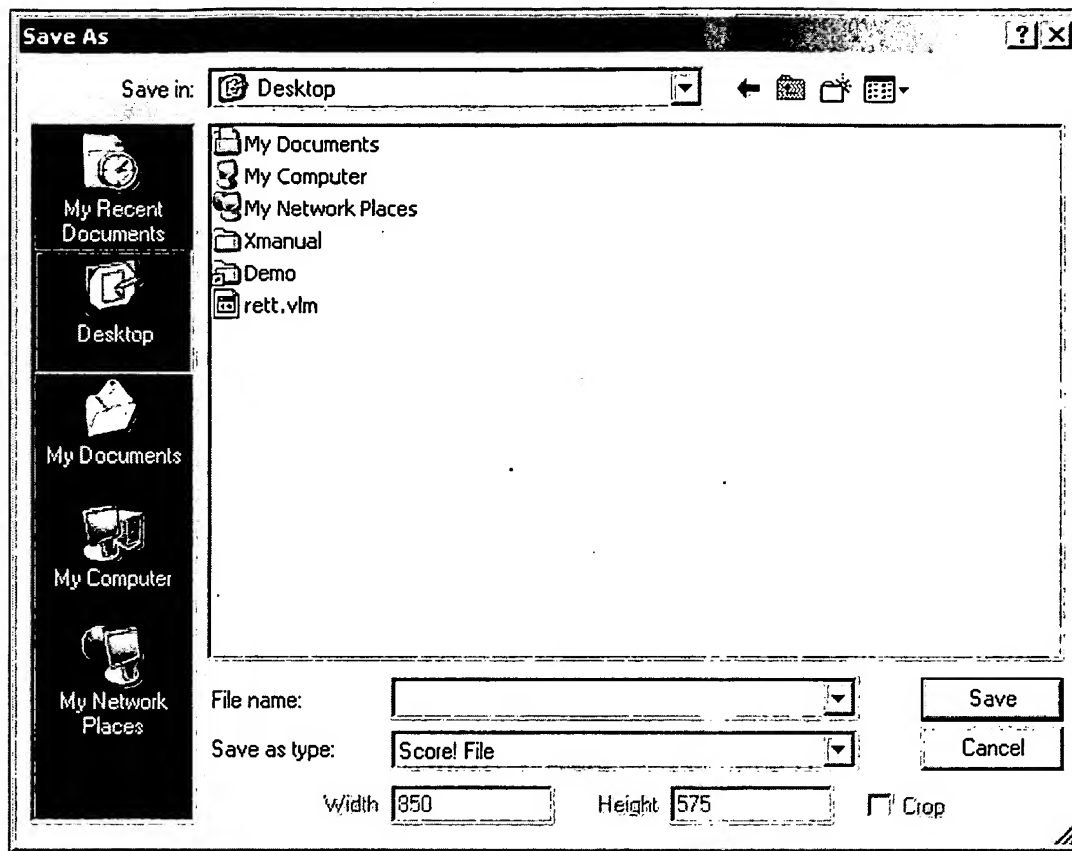
To save a file, go to *File* → *Save As...*



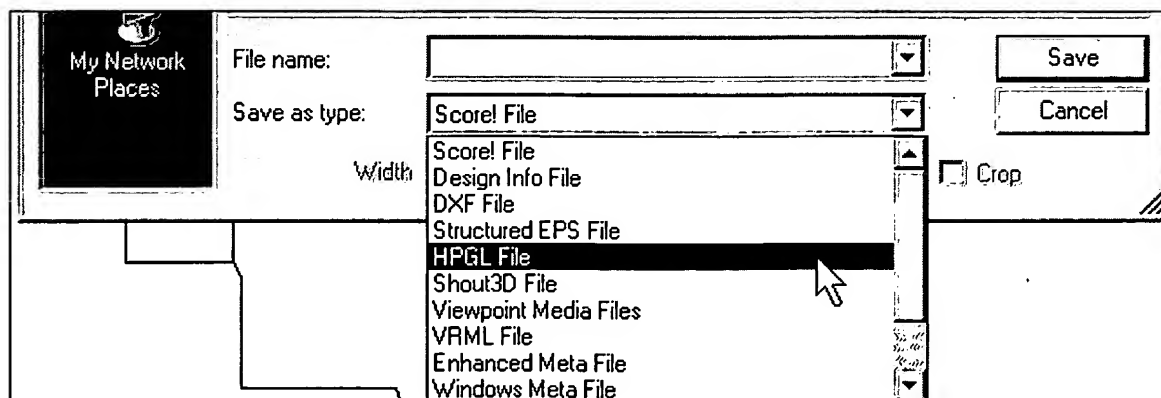
..or hit the *Save* button on the toolbar.



Score! X will bring up a standard Windows Save box.



Navigate to the drives and directories where the file is to be saved. If the file needs to be saved in a specific format, use the *Files of Type* button to choose different formats.

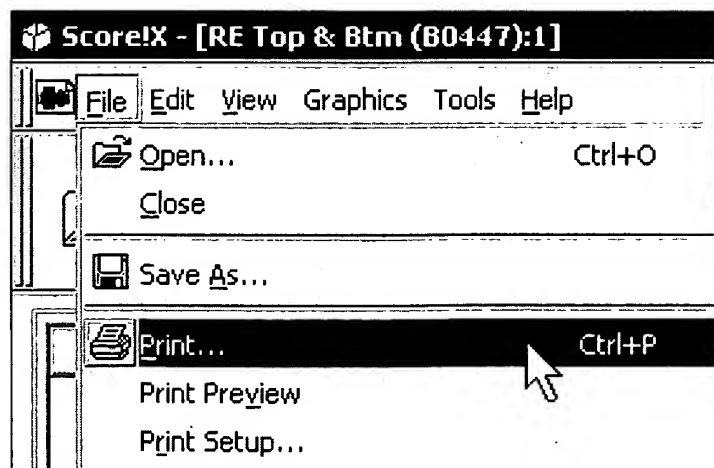


Click the *OK* button to save the file. Score! X can save these additional formats:

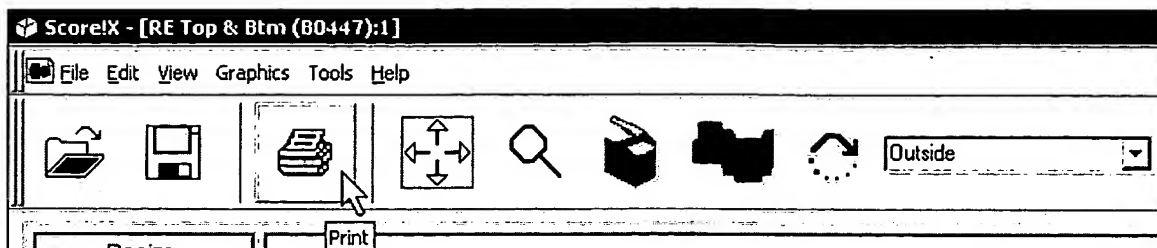
Save File As	Extension	Notes
Design Info File	.info	Database information about drawing properties.
Structured EPS File	.eps	Encapsulated PostScript that converts line types to solid for use in applications like Adobe Illustrator, or Quark Xpress.
HPGL File	.hpg	Hewlett Packard Graphics language, useful for output to plotters and sample tables.
Shout 3-D	.s3d	Shout 3-D Web object.
Viewpoint Media File	.mtx	Viewpoint 3-D Web object.
VRML File	.vml	Virtual Reality Mark-up Language; a 3-D format for Web browsing.
Enhanced Meta File	.emf	Improved Windows Meta File vector format.
Windows Meta File	.wmf	Vector format first introduced in Windows 3.x.
PNG File	.png	Portable Network Graphics; improves upon GIF images.

## Print

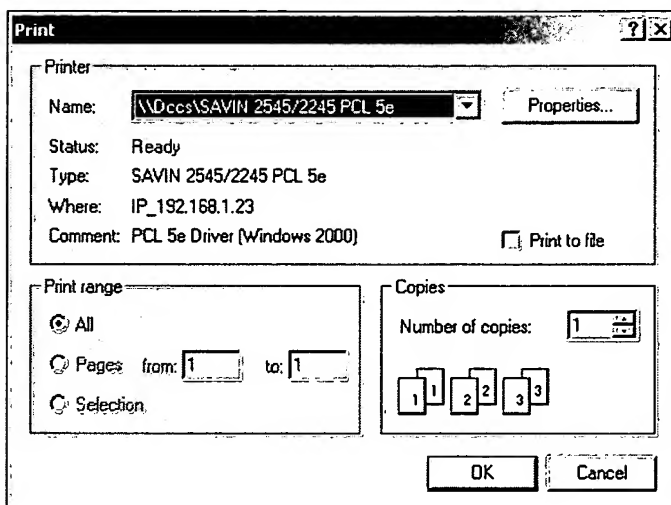
To print out items, use *File* → *Print...*



...or the *Print* button on the toolbar.



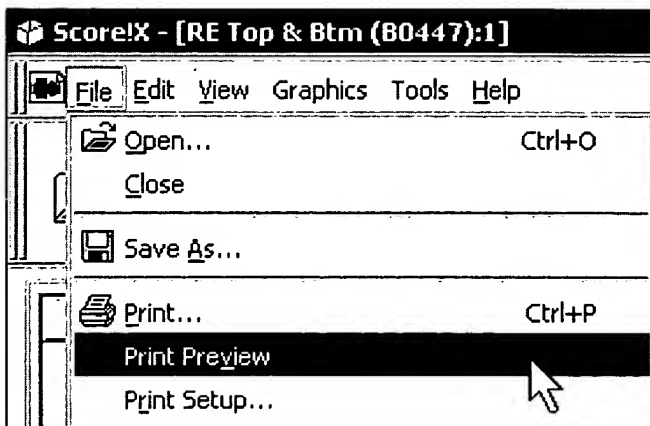
A standard Windows *Print* command box will appear.



Select the printer destination desired. Printing properties may be changed from this screen as well.

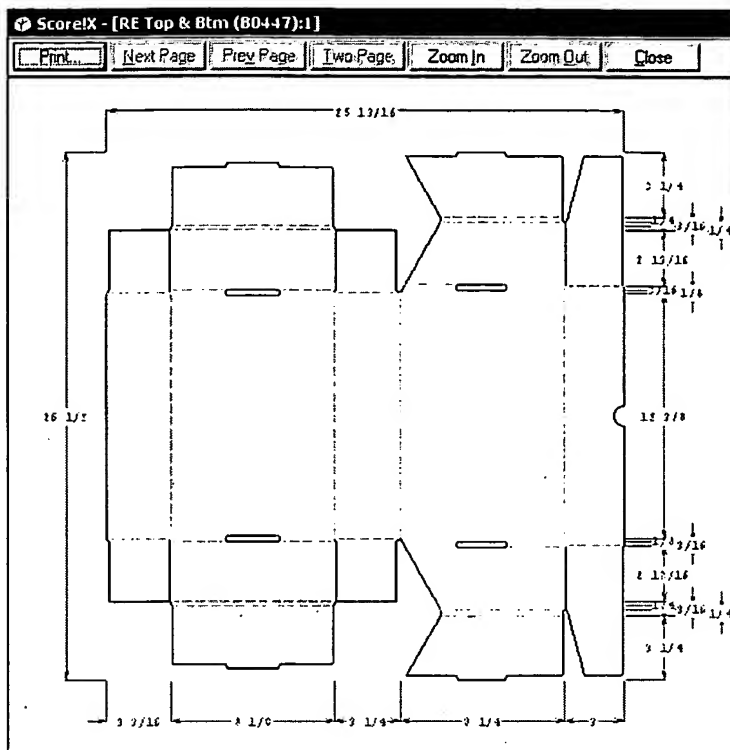
## Print Preview

To view a file before it is printed use *File* → *Print Preview*.

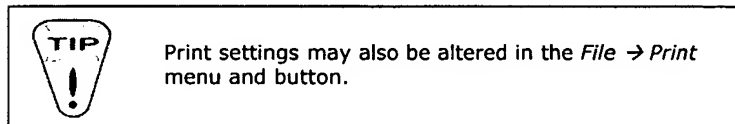
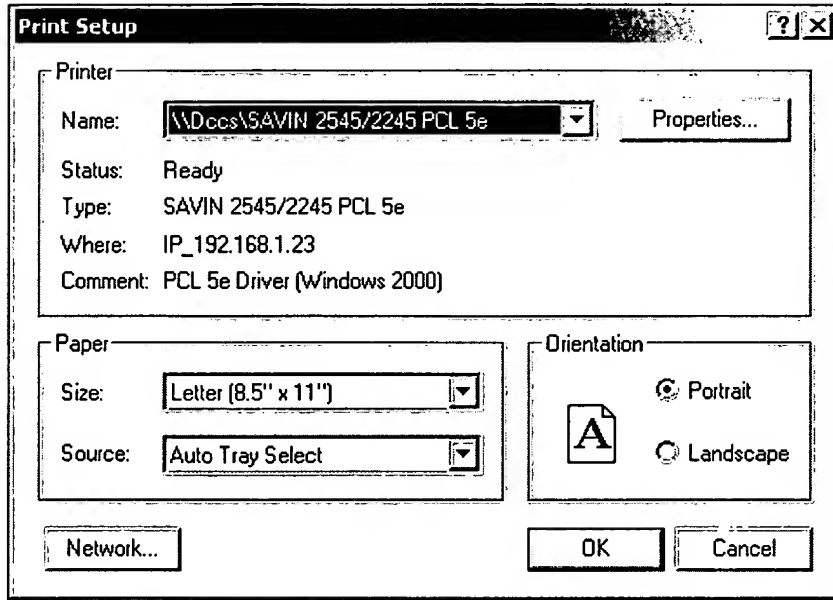




It will pull up a preview screen to view page layout.



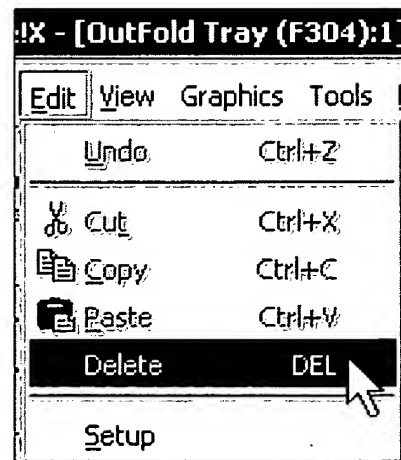
Score! X will display the standard Windows *Print Setup* box.



## Edit Menu

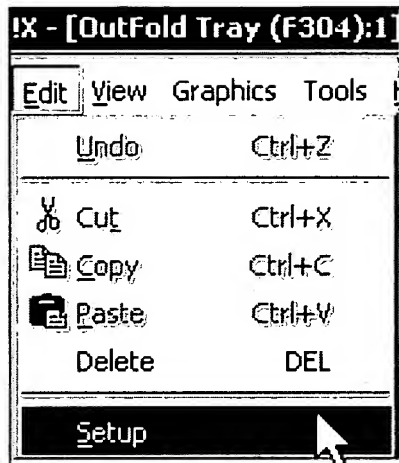
### Delete

The *Edit → Delete* option is only used in Score! X to delete an active graphic on a 2-D design. These graphics would be from the drag-and-drop graphics from the *Graphics* button (see 2-D design graphics button). To delete these, just use *Edit → Delete* or the *Delete* key on the keyboard.

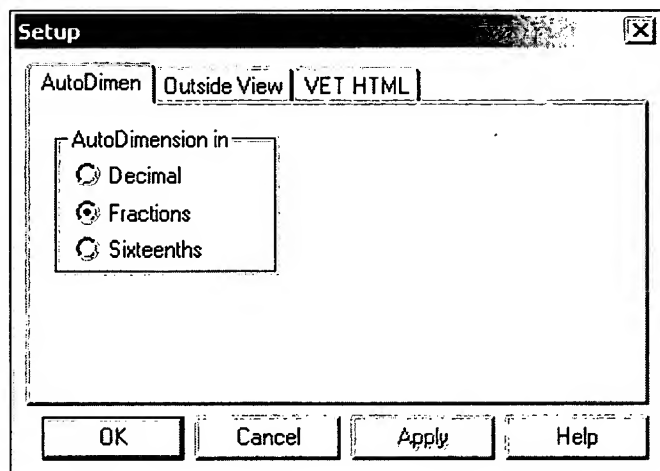


## Setup

The *Setup* option contains settings for dimensions, inside/outside view control and special settings for VET export. To access the menu, use *Edit* → *Setup*.



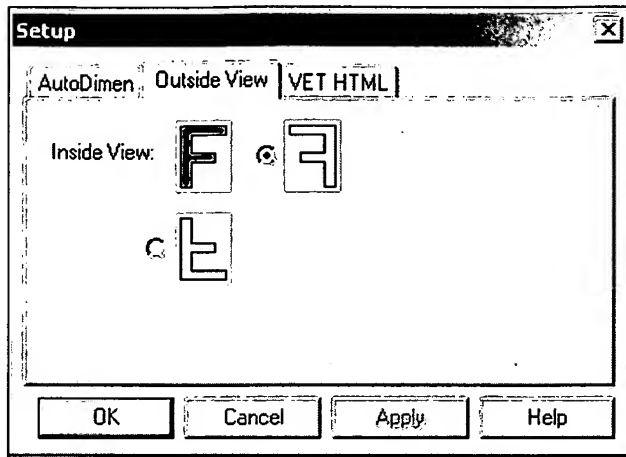
Score! X will display the *Setup* control box.



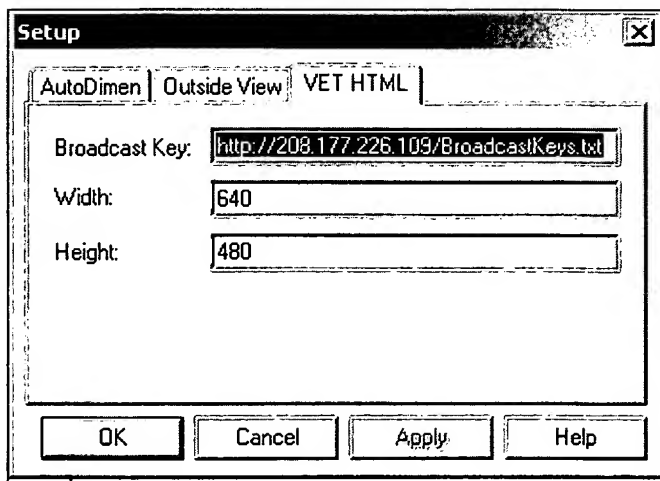
The active tab, *AutoDimen*, is for dimension settings. This gives the user three choices for how dimensions are displayed: *Decimal*, *Fraction* or *Sixteenths*. *Sixteenths* is commonly used in many corrugated manufacturing departments and some of the software programs they may use.

Format	Example 1	Example 2
Decimal	5.1875	5.75
Fraction	5 3/16	5 3/4
Sixteenths	5:03	5:12

The *Outside View* tab controls which way that Score! X flips a drawing when the Inside/Outside View button is changed on the toolbar. The default may be set for flipping on a horizontal or vertical axis. Both choices are represented graphically.



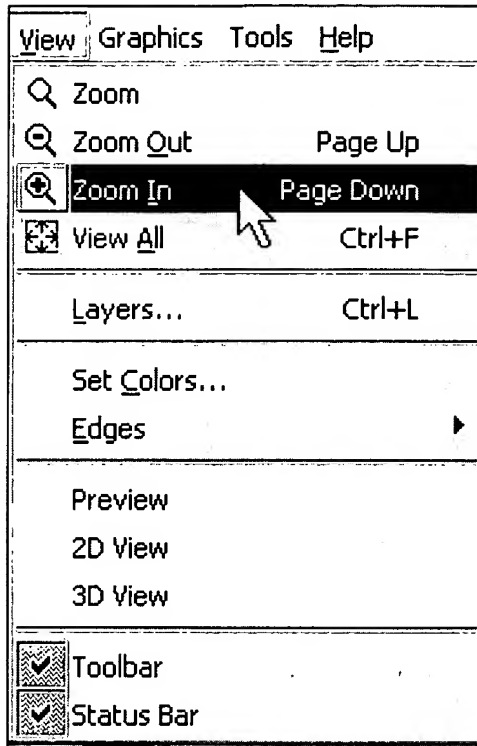
The *VET HTML* tab controls the output of the VET file format. This is the format in which *Fold Up* and *Fold Up with Graphic* files will be saved to communicate to non-Score! X users, so that the users may open, rotate and fold the files from within their default PC Web browser. It is recommended that these settings not be changed and that the defaults be used for the beginning stages. Advanced users please refer to the VET appendix.



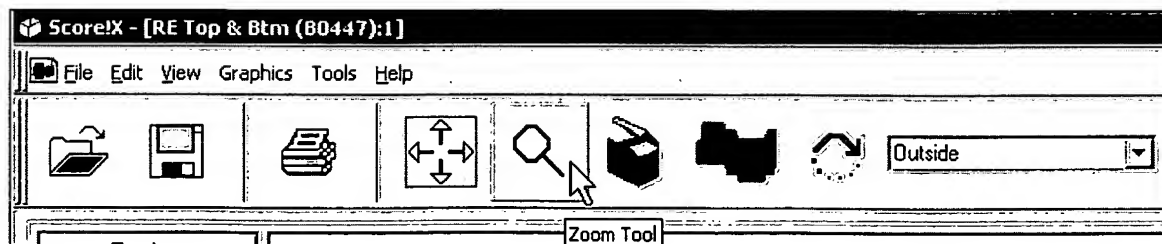
## View Menu

### Zoom

The *View* menu contains the *Zoom* tools.



This may also be accessed by the *Zoom* tool on the toolbar.



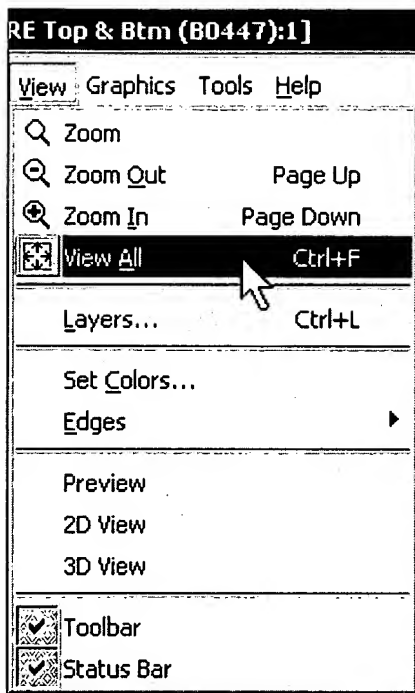
To zoom, click and drag a marquee box around the area that needs to be magnified. If one mouse click is used the whole drawing will be zoomed in. If the Shift key is held and then the mouse clicked once, Score! X will zoom the whole drawing out one time.

## Zoom In and Zoom Out

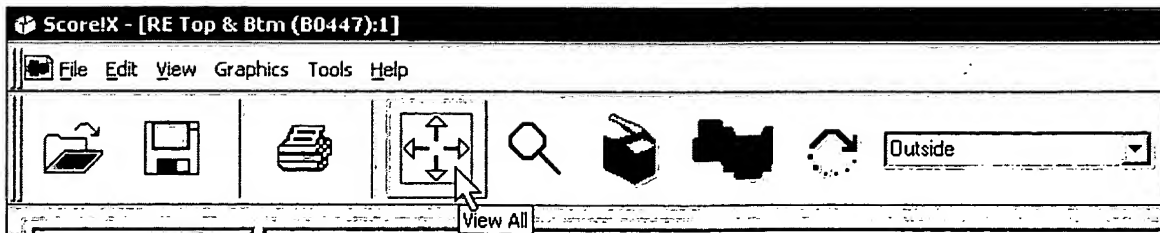
These two menu commands behave the same way as one mouse click with the zoom tool or one mouse click with the zoom tool and the Shift key being held down. The other shortcut for these two menus is the *Page Up* and *Page Dn* keys on the keyboard.

## View All

The *View All* command will zoom to fit everything on the screen. This may be accessed via the *View* menu, the *View All* tool on the toolbar, or by using the keyboard shortcut *Ctrl+F*.

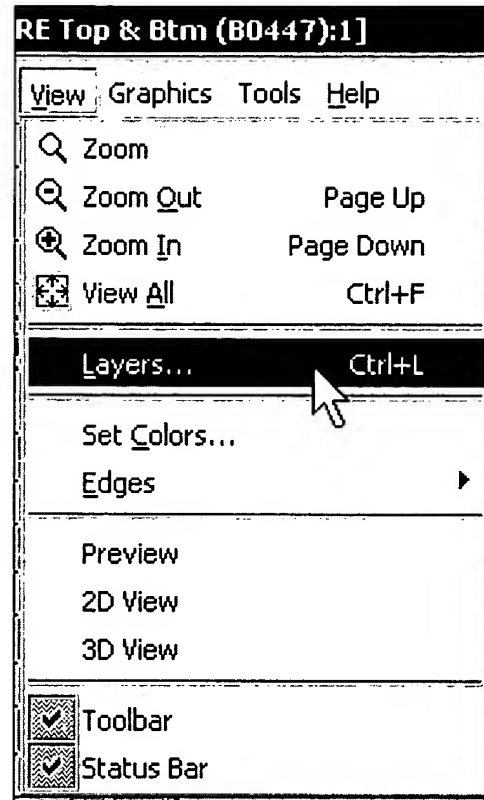
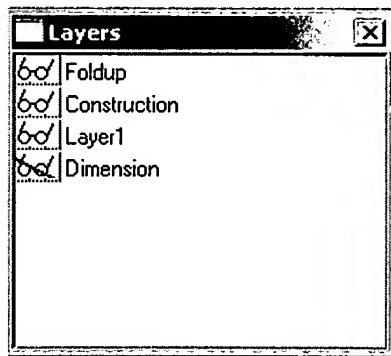
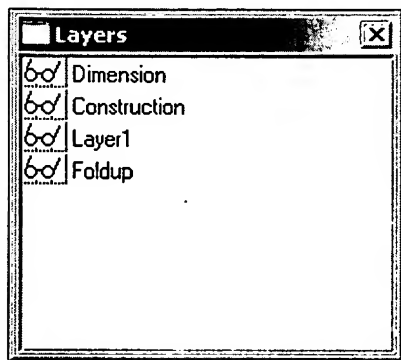


To remember the keyboard shortcut, think "F" for *fit*. Ctrl + F



## Layers

The *Layers* option may be used to hide or show layers. This function will have more advanced features in future releases. For this version, the menu should be used just for hiding and showing dimensions. To do this, click with the mouse on the eyeglasses next to the layer. This will put a red line through the glasses and will hide the dimensions. To turn them back on, re-click on the glasses and the red line will go away and the dimensions will again be visible.



## Set Colors

*Set Colors* controls the appearance of the carton in the 3-D tab. The first four bottom custom colors are the only ones currently used in Score! X.

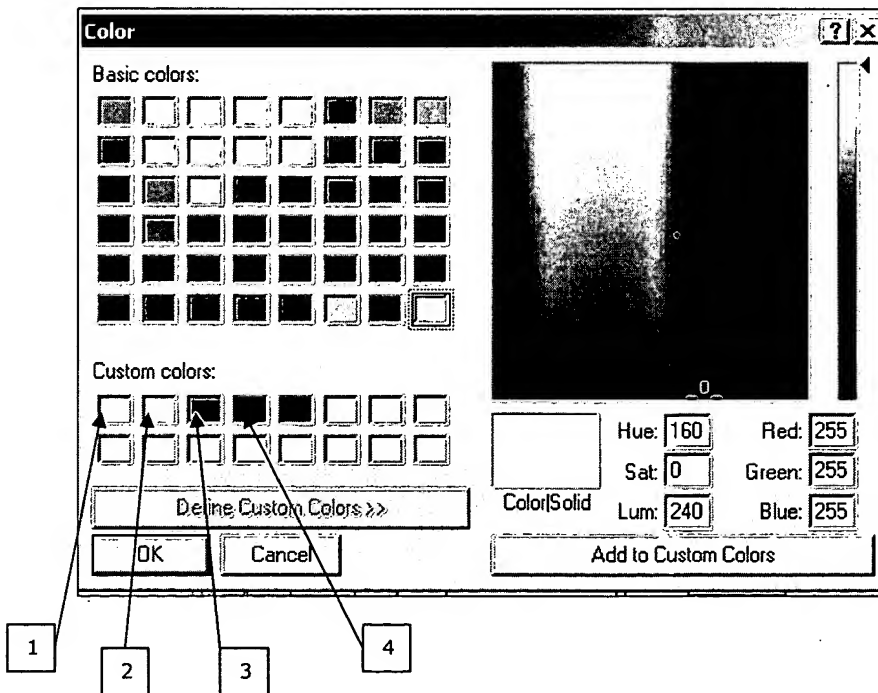
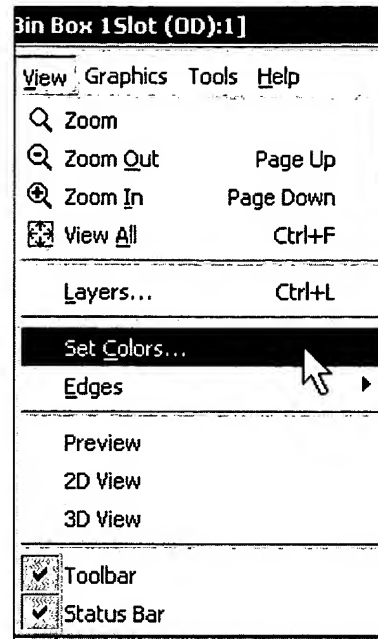
The first color (1) sets the background color. This will not show on the 3-D tab but it will be the background color for saving flat JPEG, Bitmap and PNG files. Files saved as Viewpoint files will be the same as the 3-D tab and currently only show white background.

The second color (2) sets the color for the outside of the carton.

The third color (3) sets the color for the inside of the carton.

The fourth color (4) sets the "Edge" color for the cartons, which is controlled by the *Edges* command in the *View* menu.

Customize colors by selecting the appropriate box (1-4), choosing a new color, and clicking *Add to Custom Colors*.

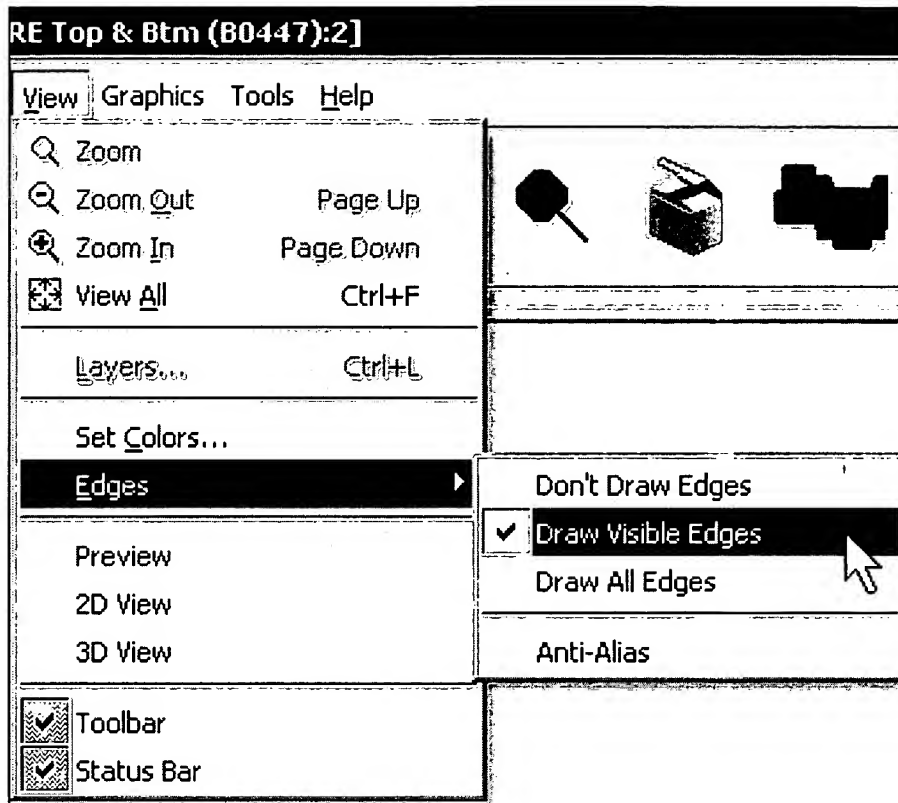


Remember background color is for saving out the flat 3-D files in JPEG, BMP and PNG formats.

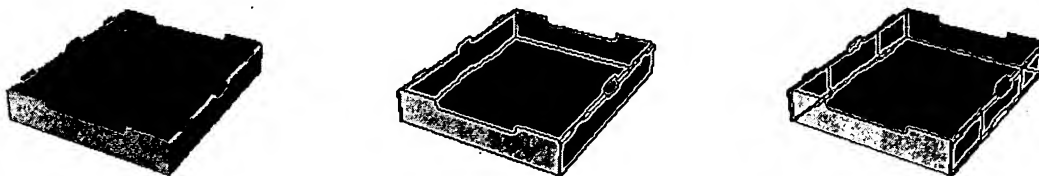


## Edges

Go to *View* → *Edges* to adjust edge appearance.

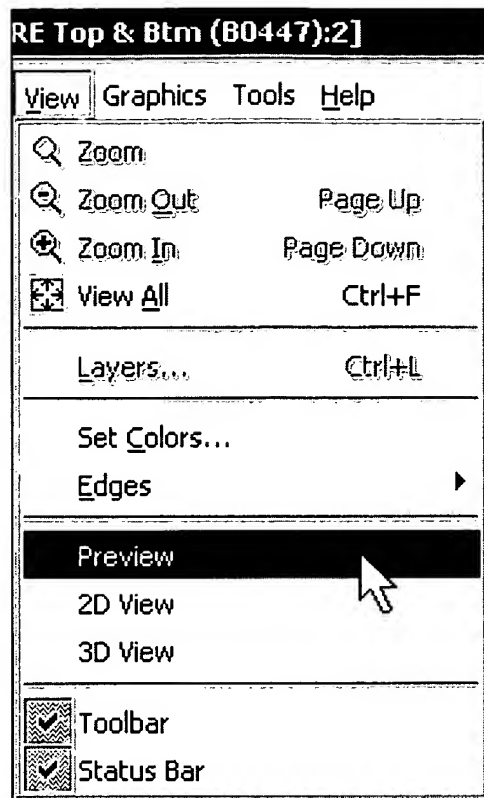


This function is useful when saving a Score! X 3-D drawing (a drawing that can be rotated in space) as a flat 2-D Bitmap image (for use in a non-3-D program such as Illustrator). The following image illustrates the three "Draw" functions: *Don't Draw Edges*, *Draw Visible Edges*, and *Draw All Edges*:



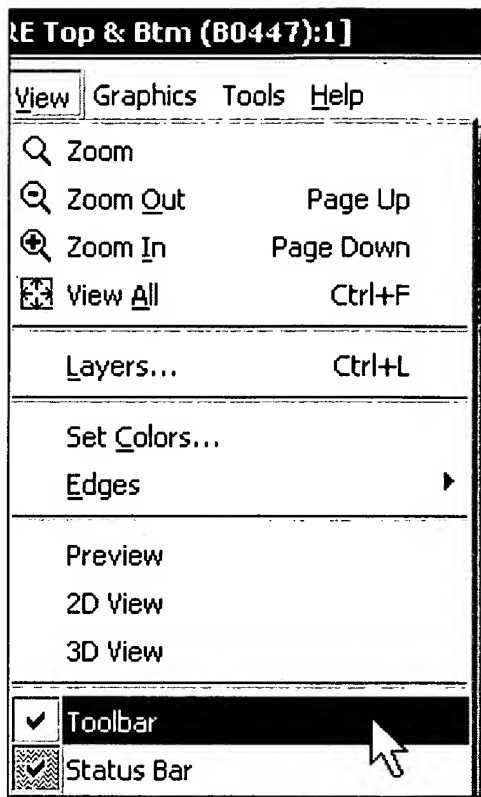
### Preview, 2-D View and 3-D View

These options are the same as hitting the three tabs at the bottom of the Score! X layout. Choosing any of these will bring the user to that tab's working environment.



## Toolbar and Status Bar

The Score! X default is to have both of these checked. If they are unchecked, Score! X will turn off the *Toolbar* or *Status* bar -- whichever is selected. These should not be turned off, as they simplify many of the Score! X processes.



## Graphics Menu

### Clear Graphics

The *Clear Graphics* option is used to clear graphics off of a 2-D design. It will clear off both full-size, loaded graphics as well as individual graphics placed from the *Graphics* button on the 2-D tab screen.

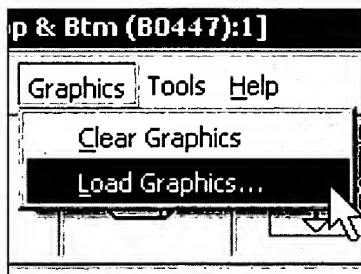


### Load Graphics

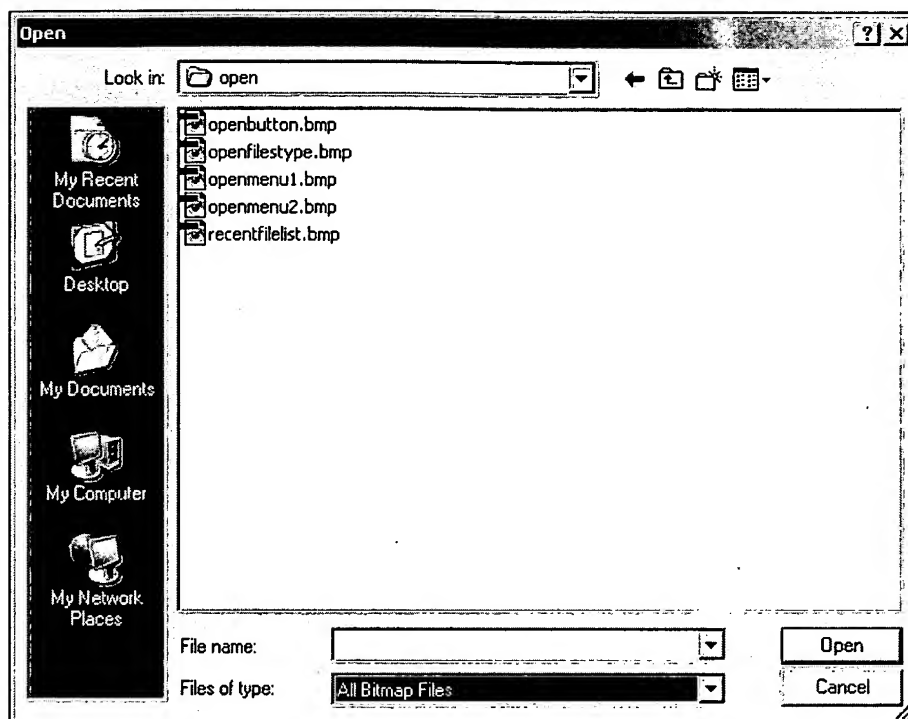
*Load Graphics* is the way in which Score! X gets outside graphic files loaded onto a 2-D carton design. These graphic files would be created in an application such as Illustrator or Freehand by exporting the die line as an EPS, creating art on a new layer that is knife-to-knife (no trimmer bleed) and then saved in a bitmap form such as .jpg, .bmp or .png. This one-time load will load the graphic design on top of the 2-D carton design.



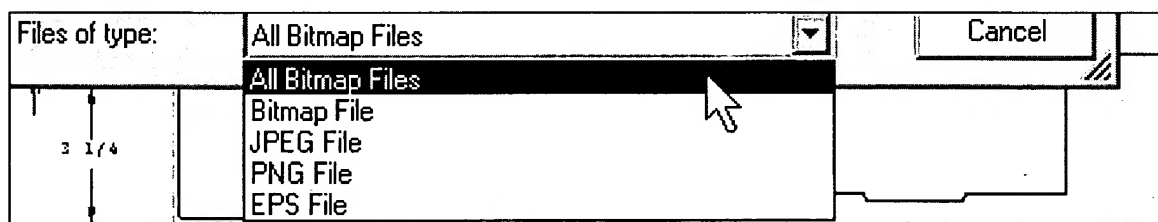
Reducing the resolution of the art will improve load speeds in Score! X.



Just like the *Open* and *Save* commands, *Load Graphics* brings up a standard Windows *Open* box. Navigate to the drives and directories from which the file will be opened.



If the file needs to be saved in a specific format, use the *Files of Type* button to choose different formats.



The graphical file formats that may be loaded are.

**Bitmap (.bmp)**

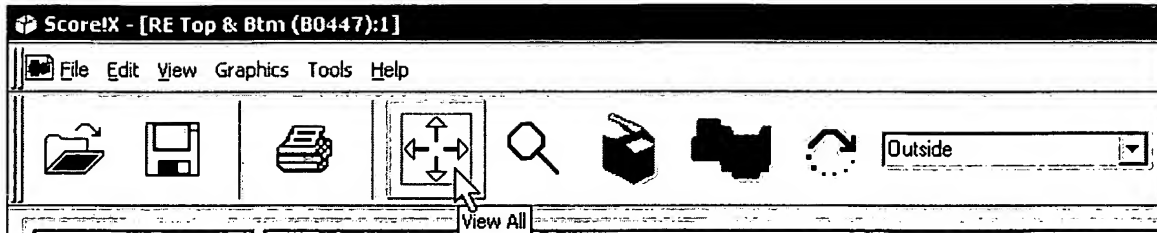
**Jpeg (.jpg)**

**Encapsulated Postscript (.eps)**

Select the specific file and click the *OK* button. The graphic will be placed on the carton.



Remember, if a graphic is not scaled properly, use the *View All* button on the toolbar to automatically scale it to the carton.

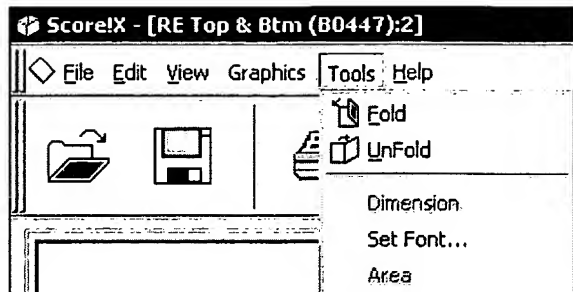


Score! X files and graphics files are stored separately. See Appendix 1 on saving and exporting file formats.

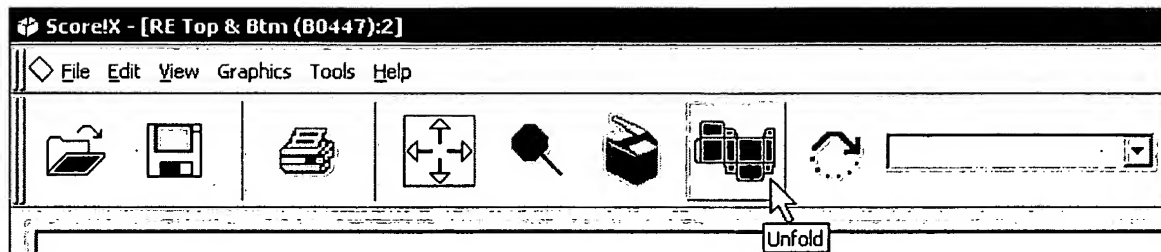
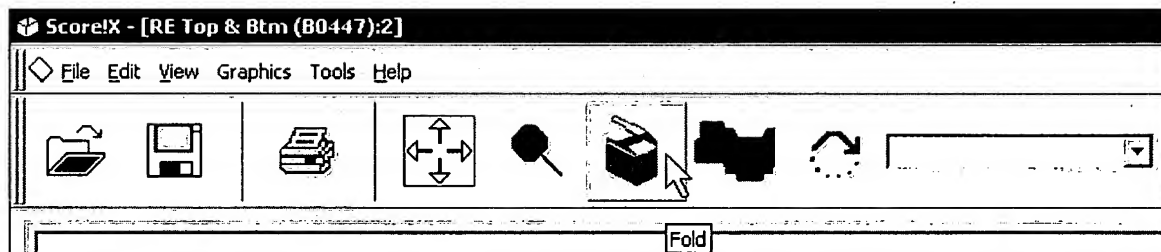
## Tools Menu

### Fold and Unfold

*Fold* and *Unfold* in the *Tools* menu are used in the 3-D tab section of Score! X. The cartons may be folded up with or without graphics.



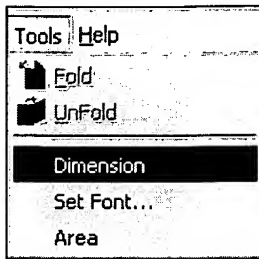
There are also *Fold* and *Unfold* icons located on the toolbar.



Some cartons may not fold up or down all the way after hitting the button. If the *Fold* button is hit and the carton does a series of folds but does not fold all the way, look at the button. If it is still active, click the button again and it will fold some more. Some of the library files or custom files that are created by a Score! CAD user may have multiple steps set in the *Fold Up* routine.

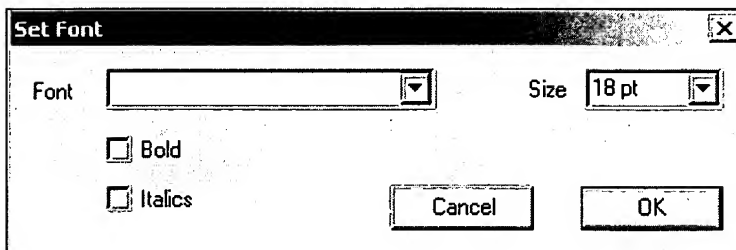
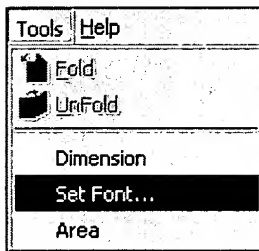
## Dimension

*Dimension* is used in the 2-D tab environment of Score! X. This function will automatically dimension a drawing. It lays out dimensions in a score-to-score and overall blank size format. This is currently the only dimensioning offered. Future updates will have more robust dimension tools.



## Set Font

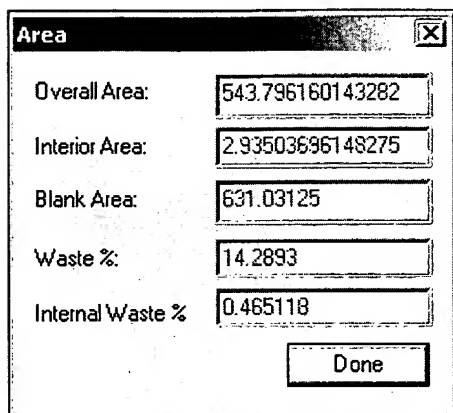
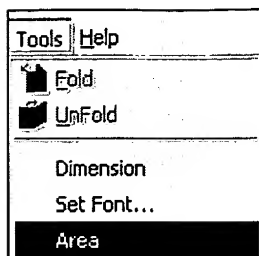
The *Set Font* option will bring up a standard Windows *Set Font* dialogue box. The size and type of font may be chosen here. After hitting the *OK* button, the dimensions will all update to the new font size and style.





## Area

*Area* brings up blank and waste calculations based on a given carton.

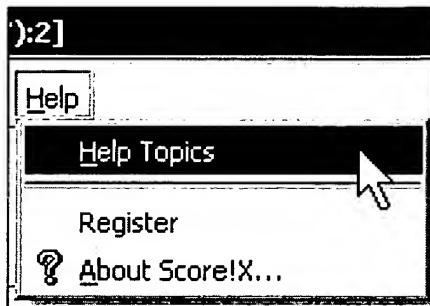


*Overall Area* is the area of the carton design in square inches. *Interior Area* measures all cut-outs in square inches. *Blank Area* is the maximum point in the x and y direction area in square inches. *Waste %* is the total waste percentage, including internal waste. *Internal Waste %* is the internal waste percentage only.

## Help Menu

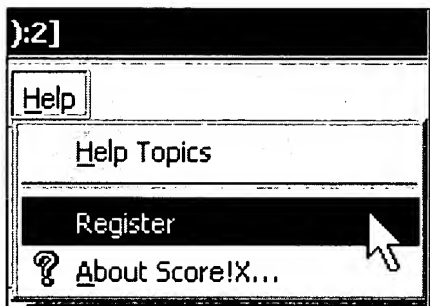
### Help Topics

Clicking *Help* → *Help Topics* will open a copy of this user's manual.



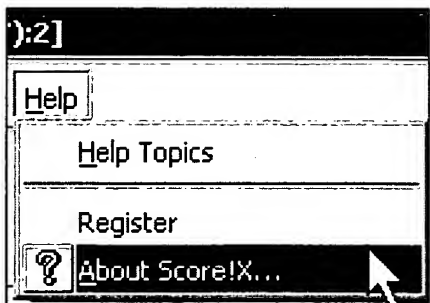
### Register

If not already registered, access Score! X product registration by clicking here.



### About Score! X

*About Score! X* lists all pertinent licensing menus and credits. There are also links to the Web sites of certain licenses.



# Score! X

OK

Register

Score!X - version 1.0r63  
30 days left in license

erin  
di  
1DF

Dimensional Impressions  
16000 Ventura Blvd, Suite 910  
Encino, CA 91436  
(818) 379-7039  
<http://www.dscore.com>

Copyright © 2000-2001 Dimensional CAD/CAM Systems, Encino CA  
All Rights Reserved

-----  
This product includes software copyrighted by the RogueWave  
Software. (<http://www.roguewave.com/>).  
-----

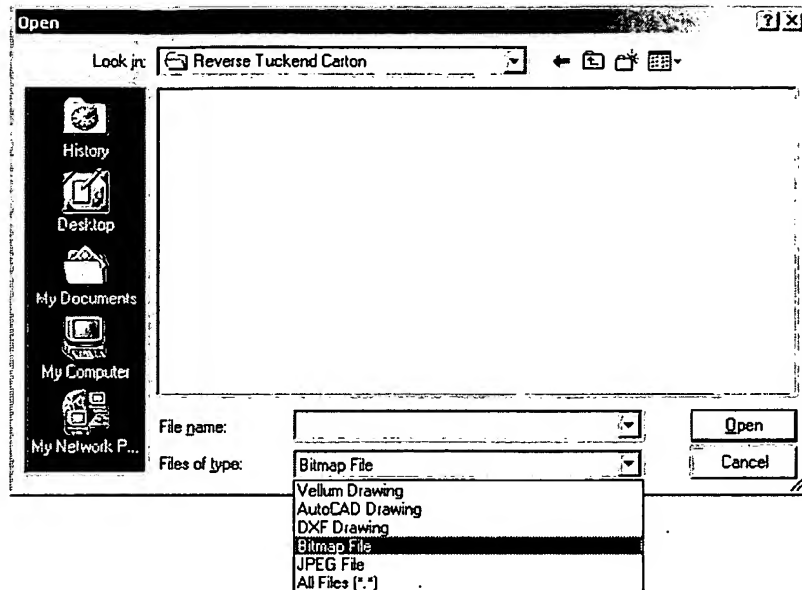
-----  
This product includes software copyrighted by the OpenDWG Alliance.  
(<http://www.opendwg.org/>).  
-----

-----  
Portions of the imaging technology of this Application are copyrighted by  
AccuSoft Corporation  
-----

-----  
This product includes software copyrighted by the Viewpoint  
Technology. (<http://www.viewpoint.com/>).  
-----

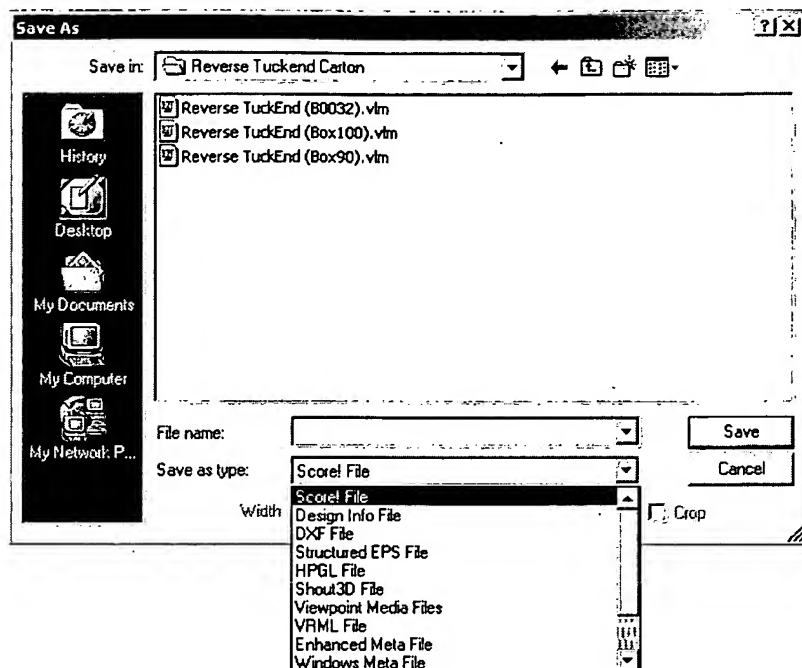
# Appendix

## 1. Import/Export Formats



Open File	Extension	Notes
Score! / Vellum Drawing	.vlm	Created in Score! CAD or Score! X.
AutoCAD Drawing	.dwg	Created by AutoCAD, IntelliCAD, and other CAD systems.
AutoCAD Interchange	.dxf	Drawing interchange format; used to access the data stored in DWG files and to exchange drawing files between CAD programs.
Bitmap File	.bmp	Standard raster file for Windows.
JPEG File	.jpg	Joint Photographic Experts Group. Used for images on Web sites; glossy compression.

Score! X can save these formats in addition to the following:



Save File As	Extension	Notes
Design Info File	.info	Database information about drawing properties.
Structured EPS File	.eps	Encapsulated PostScript that converts line types to solid for use in applications like Adobe Illustrator, or Quark Xpress.
HPGL File	.hpg	Hewlett Packard Graphics language, useful for output to plotters and sample tables.
Shout 3-D	.s3d	Shout 3-D Web object.
Viewpoint Media File	.mtx	Viewpoint 3-D Web object.
VRML File	.vml	Virtual Reality Mark-up Language; a 3-D format for Web browsing.
Enhanced Meta File	.emf	Improved Windows Meta File vector format.
Windows Meta File	.wmf	Vector format first introduced in Windows 3.x.
PNG File	.png	Portable Network Graphics; improves upon GIF images.

## 2. Creating Score! X Standards with Fold Order in Score! CAD

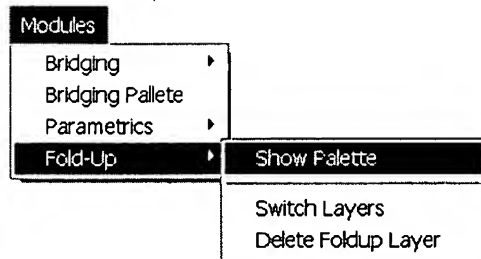
In order to create a *Standard* for use with Score! X one must have version 5.3 or later of Score! CAD.

### Make Sure Score! File is Parametric

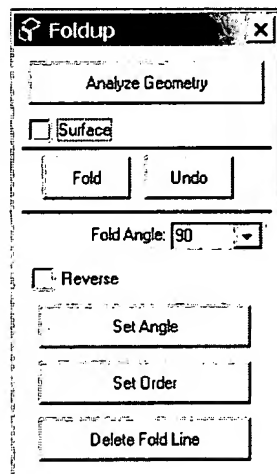
To work as a *Standard*, a file must be parametric. Score! X will fold any file that Score! CAD can fold, but in order to be a *Standard*, it must resolve in Score! first. If there is difficulty resolving the file, or parametrics are an unfamiliar area, training is available from Dimensional Impressions. Technical Support will assist customers on Annual Maintenance with files that are nearly parametric (ten or so unrelated groups/overconstrains).

### Open the file in Score!

Open the parametric file. Click on *Fold-Up* → *Show Palette*.



The following menu appears...

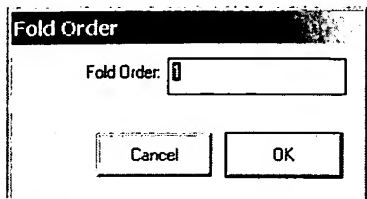


Analyze the geometry in the usual manner, making sure NOT TO CHECK THE SURFACE BOX. It is important to create a wireframe only.

At this time, if necessary, click on the score lines that require angles other than 90, and set them as necessary.

## Set Fold Order

Once the fold angles are set, the user may now select the score lines in the order in which they fold. Select the first line (or lines) and click on *Set Order*. A dialog with the number 1 will appear.



Click OK, then select the next line and click *Set Order*. Number 2 will now appear. Repeat until all scores are in the proper fold sequence. Save the file.

If desired, test the file within Score! X to see if it folds properly. If not, re-open the Score! file, and click on the fold lines, click on the *Set Order*. Their current sequence appears in the box. Change the number as necessary.



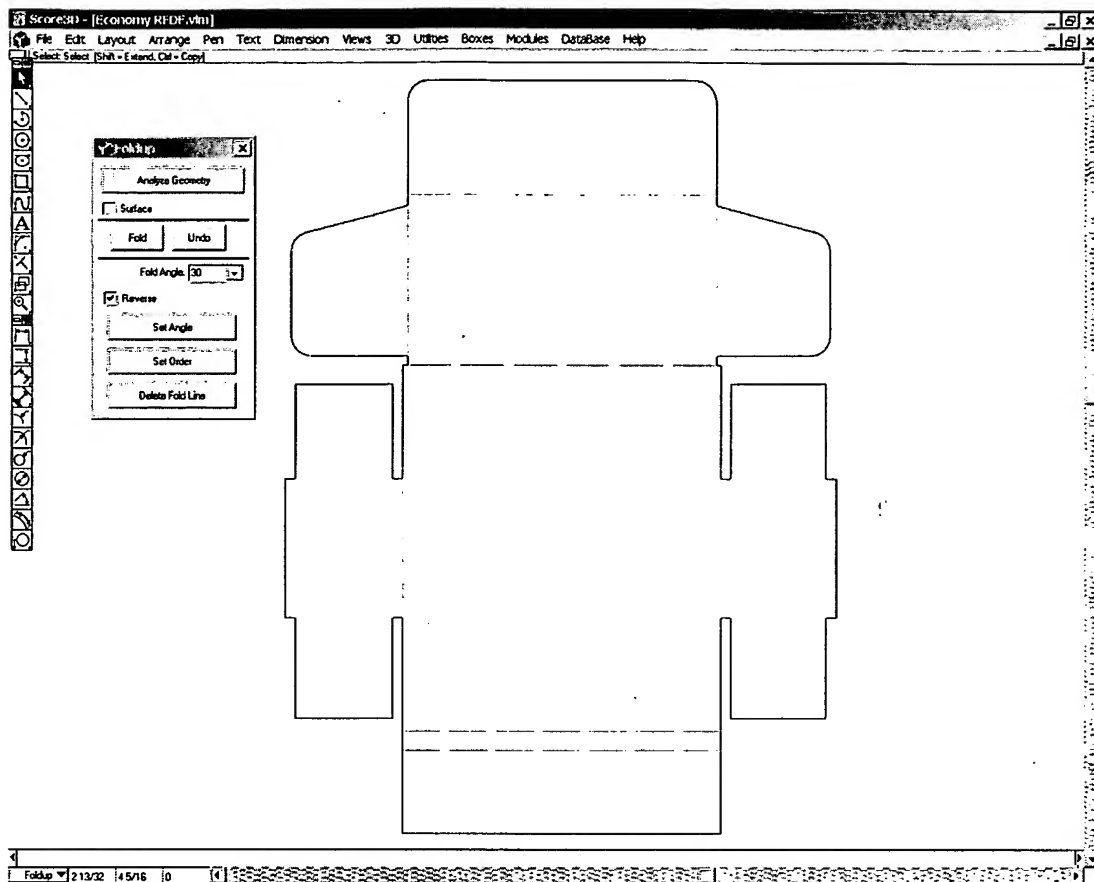
The user can click on more than one score line and assign the same fold order to each. Score! X will even fold scores opening and scores closing in opposite directions at the same time - such as the body scores of a glued tube folded flat.

## Setting Multiple Folds

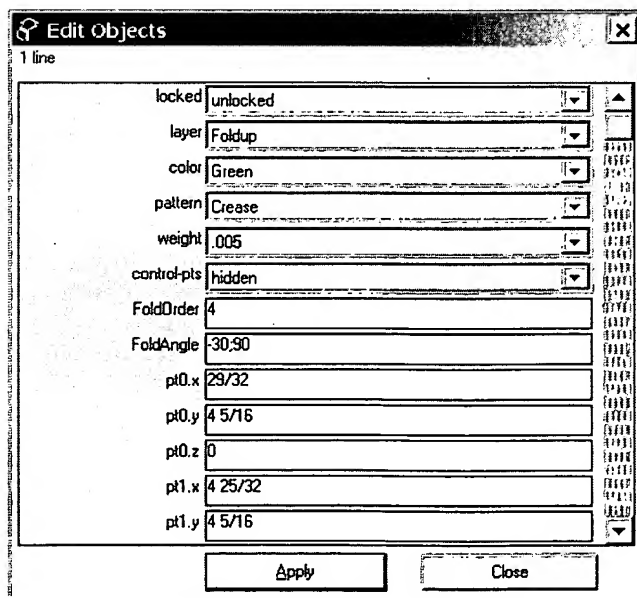
In this example there is a tray (Standard Economy RFDF.vlm) with a lid that is to fold in two distinct steps - the maximum currently allowed within Score! X. This will enable the Score! X user to fold the item partially, then click the fold icon a second time in Score! X to finish the fold-up.



Open, analyze, and set fold angles for all scoring the first fold sequence of the drawing. This should create a file whose lid is not closed. Set the fold angle for the score of the lid at an angle of perhaps -30°, in order to show the lid slightly back.



When all of the fold angles have been set for the first fold sequence, set the fold order. When that is complete, click on the lid crease line shown above, and click on **Edit → Edit Objects (Ctrl+I)**.





There are two new properties listed for this line. One is *FoldOrder*, and the other is *FoldAngle*. Notice that since this line is the ONLY line to fold in the second series, the *FoldOrder* for the second series need not be set. If there is a sequence of folds in a file, add a semi-colon (;) between the first and second *FoldOrder*, and re-sequence the second set of steps.

In the *FoldAngle*, there are two sets of numbers. The first was placed by selecting a reverse 30 fold in the *Fold-Up* menu. The second number (90°) was edited into this field, and the *Apply* button was clicked. Notice the number is the fold as the user requires it, not a cumulative number (Score! X did not add -30 plus 90 to get 120).

This introduces the second fold for this score line. Save the file and test it within Score! X.

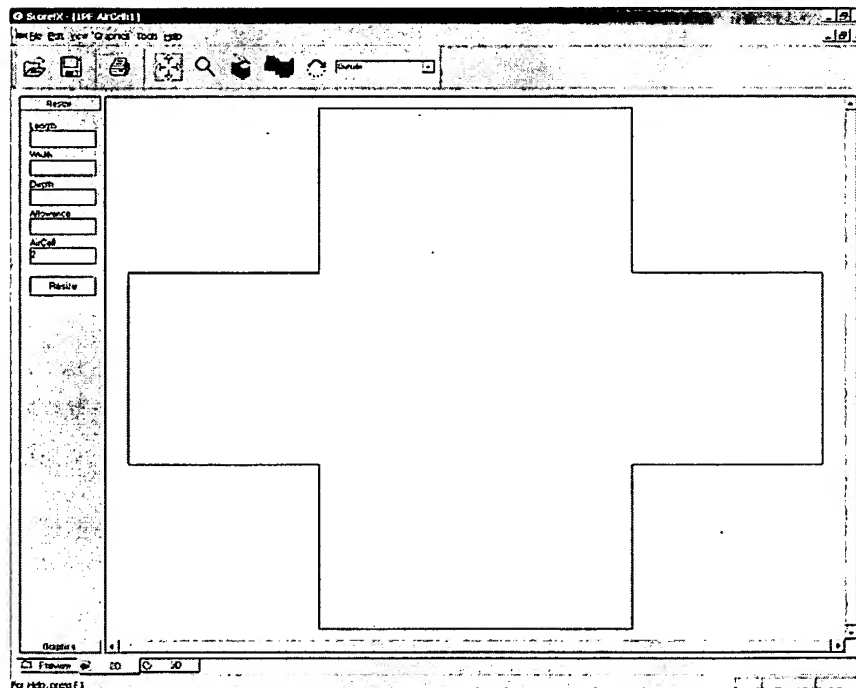
### 3. Creating Preview Images in Score! X

If a *Standard* for Score! X has been created in Score! CAD, it will need to be added to a custom library and perhaps previewed. In order to create the previews, the user must have a third party image editing software, such as **Adobe** Photoshop, **Micrografx** Picture Publisher, etc. The preview items in the library were created partially in Score! X and partially in a third party image editing software. One of these third party applications **MUST** be present to create the side-by-side views. Without the use of image editing software, only one view can be saved as a preview.

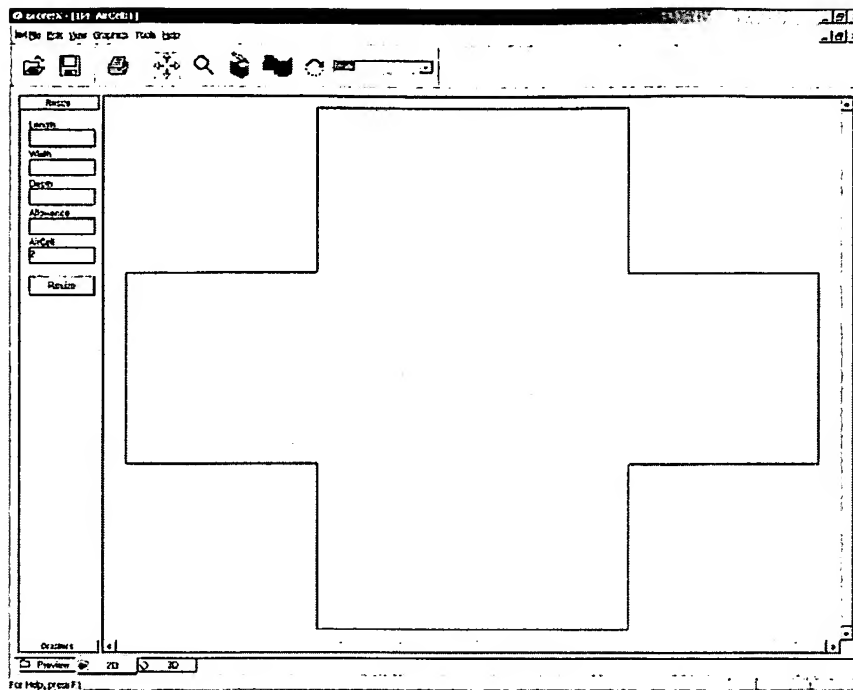
The previews in the *Standards Library* are all 520-pixels wide and 200-pixels high. Here is how they were created (original *Standards* can be created in any size):

#### Open the Drawing in Score! X

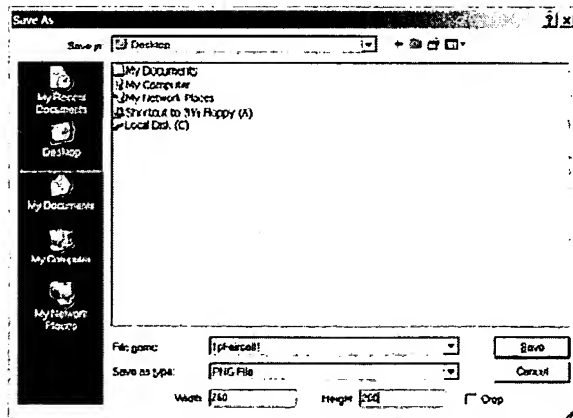
Run Score! X and open the file from within it. Click on the 2-D tab at the bottom.



Make sure *Inside/Outside* window is set to **Inside**.



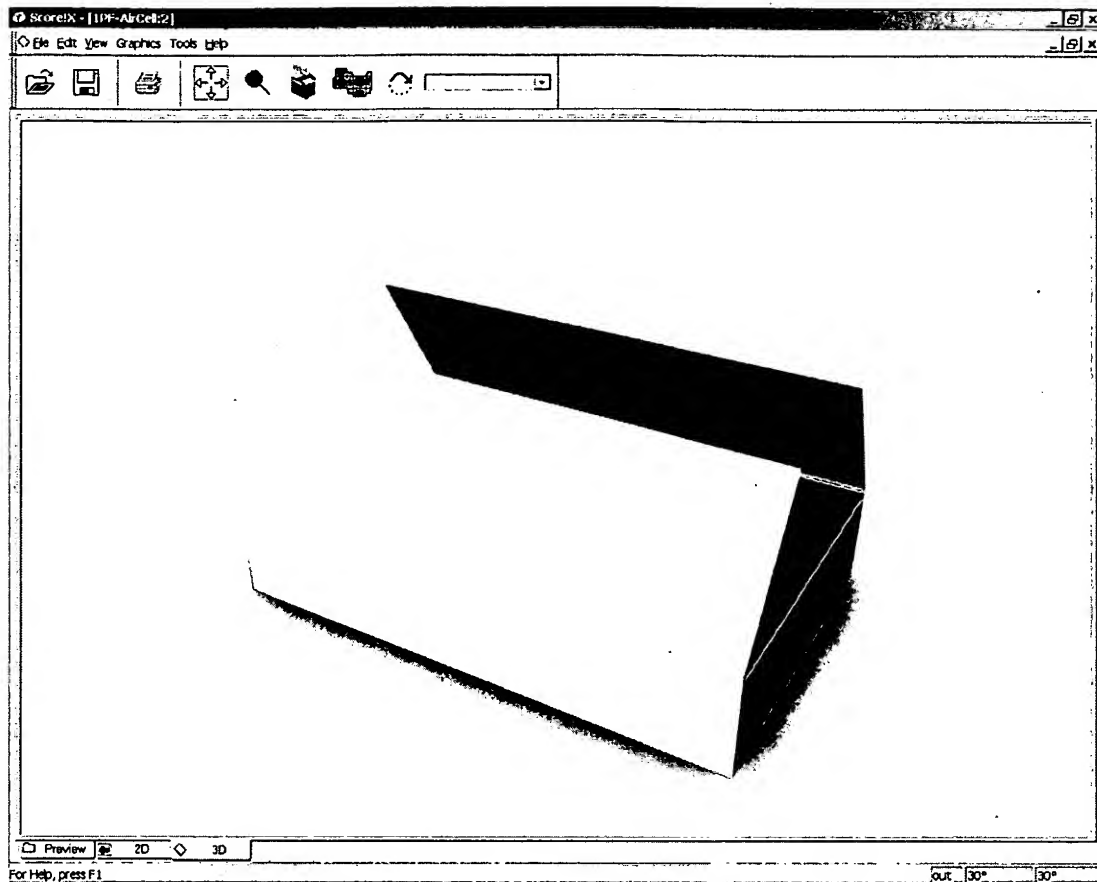
Choose File>Save As, and the following appears...



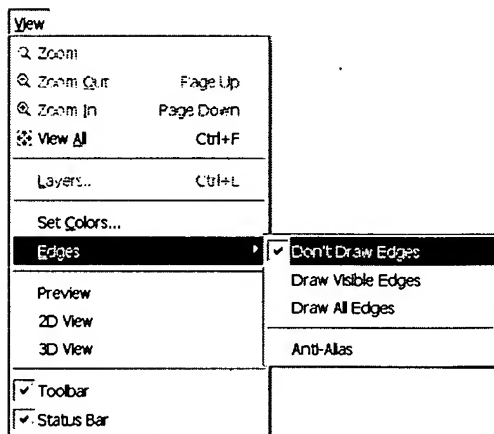
Name the file the same as the standard **WITH THE EXCEPTION** of adding a number such as 1. Score! X adds this number, because it will combine two files into the final preview image. The file type should be **PNG**, the width set to **260**, the height set to **200**.

Click **Save**.

Next, click on the 3-D tab. Rotate the view as desired to preview.



Choose *View* → *Edges* from the menu.

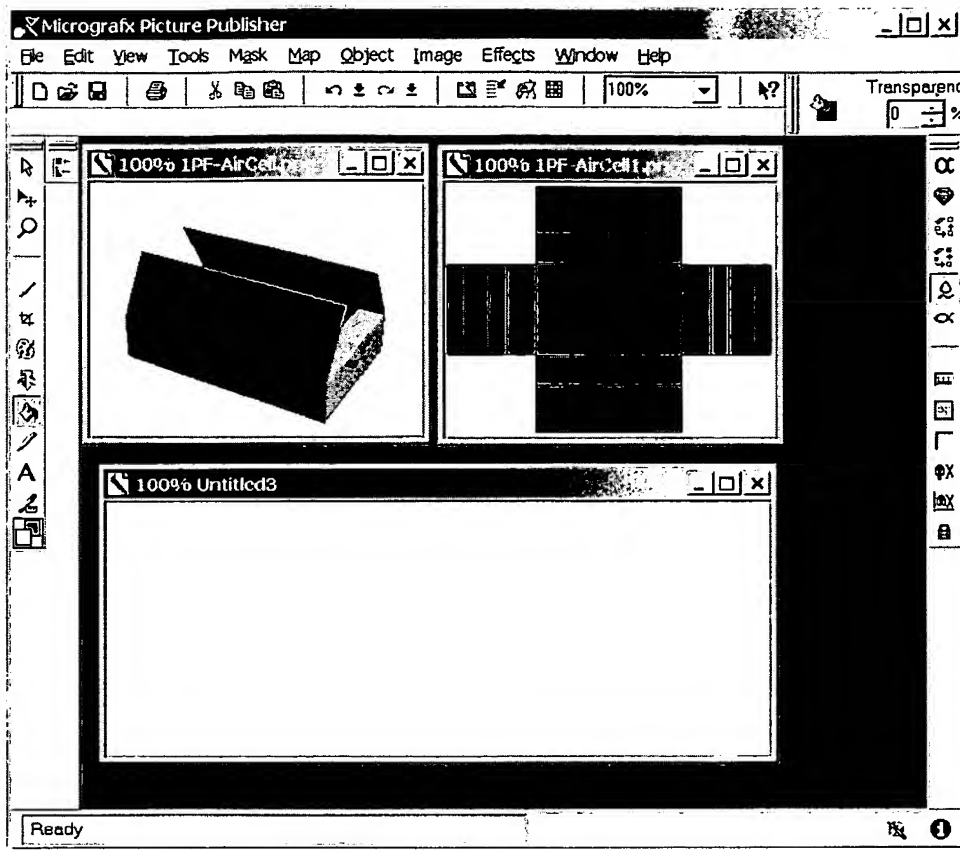


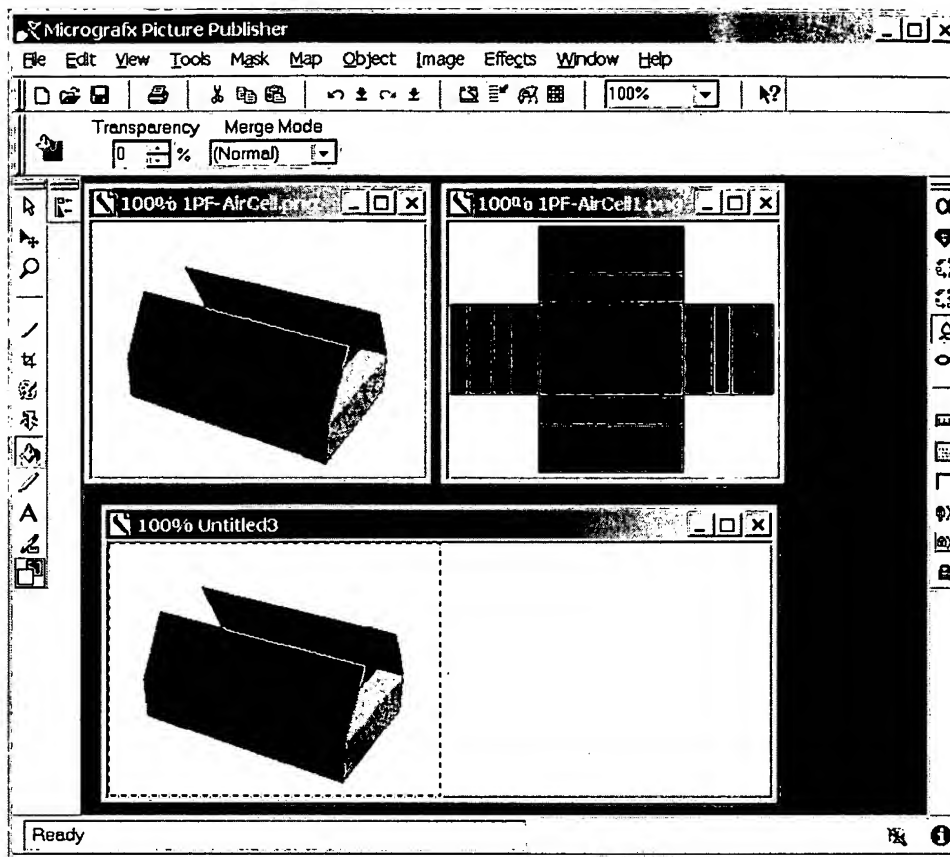
Click on *Don't Draw Edges*.

Now, select *Save As*, like before, only the filename will contain the number 2 instead of 1. Use the PNG and the same width and height as before.

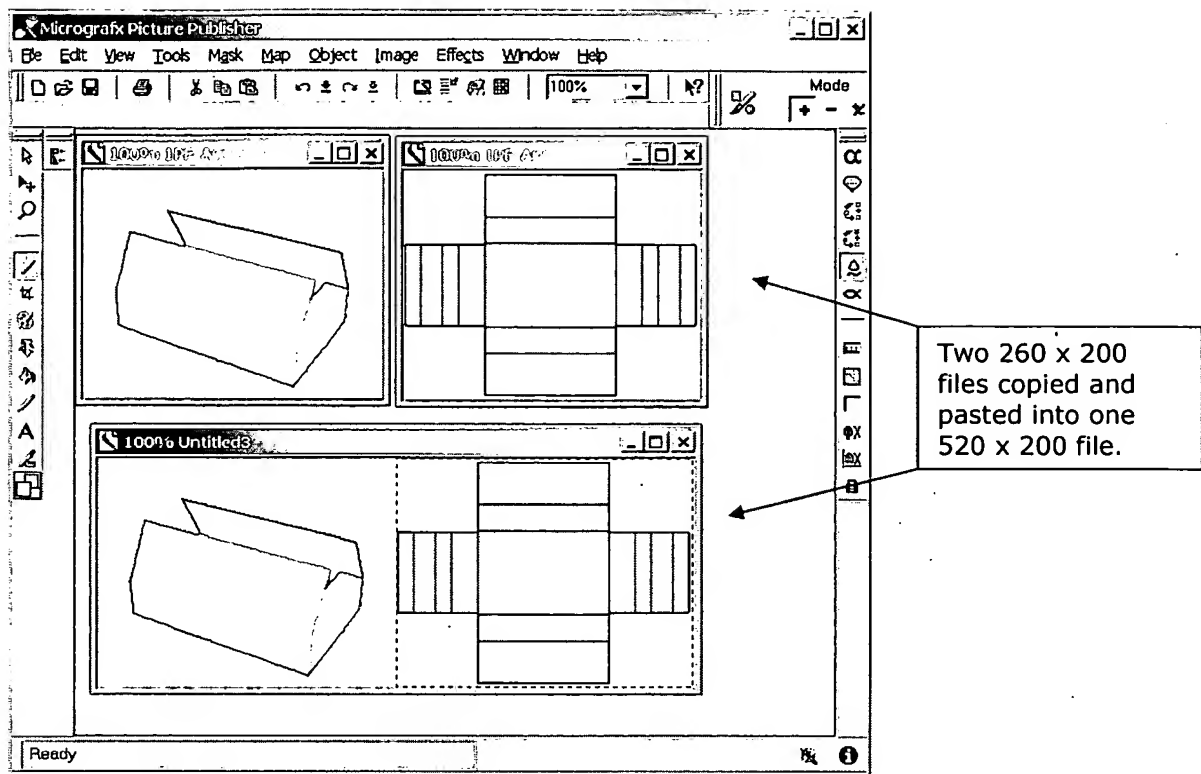
### Combine Images in 3<sup>rd</sup> Party Application

Using the third party image editing application, combine the two PNG images side by side. One way to start is by opening the two views, and creating a new blank image that is 520 x 200.

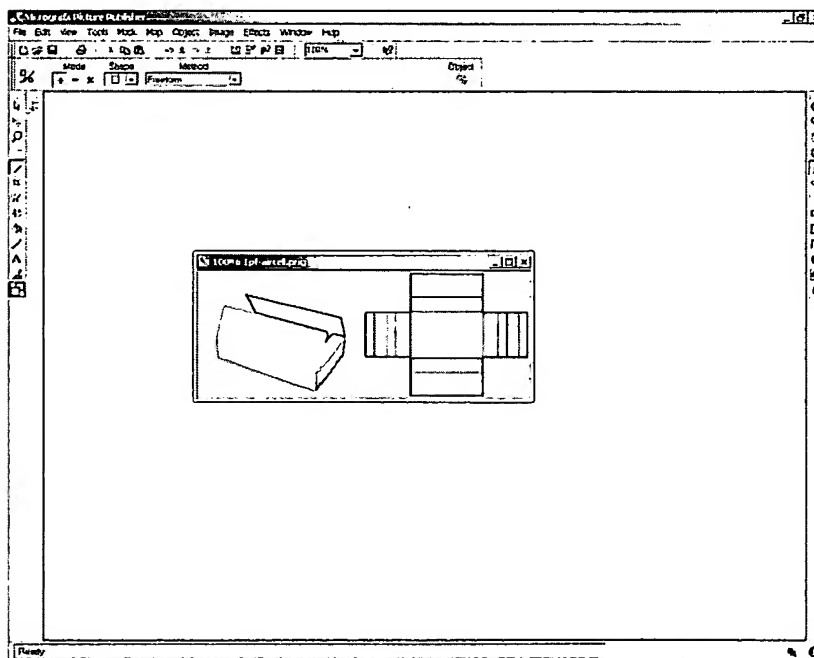




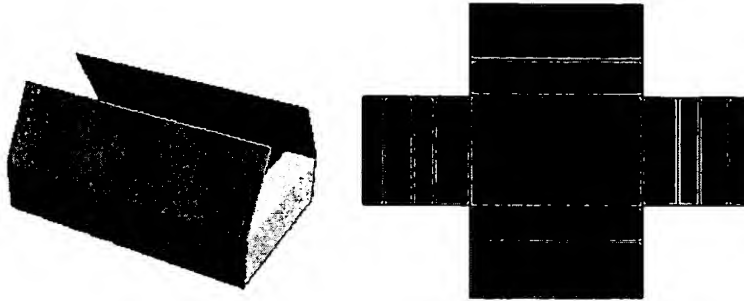
Copy each of the views and paste them into the new image, one to the left and one to the right (see next page also).



Save the file, THIS TIME EXACTLY AS THE VLM FILE NAME.



The results should look like this...

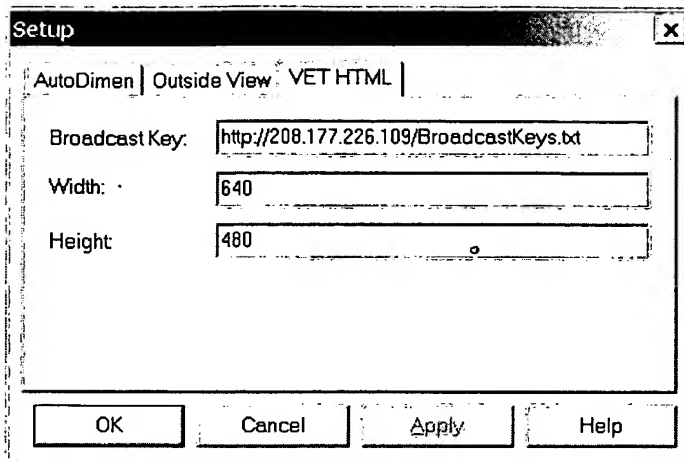


Standard and PNG files need to be placed in the DesignLib folder located in C:\Program Files\Dimensional Impressions\Score! X\DesignLib. Both the **VLM** and the **PNG** with the same file name must be in that folder. When Score! X is opened, DesignLib will appear at the bottom of the Preview tab.



#### 4. Changing VET Size in HTML Browser

The VET (Viewpoint Experience Technology) frame that appears in the Web browser when one saves to Viewpoint Media Files, has a default size of 640-pixels by 480-pixels. The size of this frame may be increased by choosing *Edit* → *Setup*, and selecting the VET HTML tab at the top of the dialog.

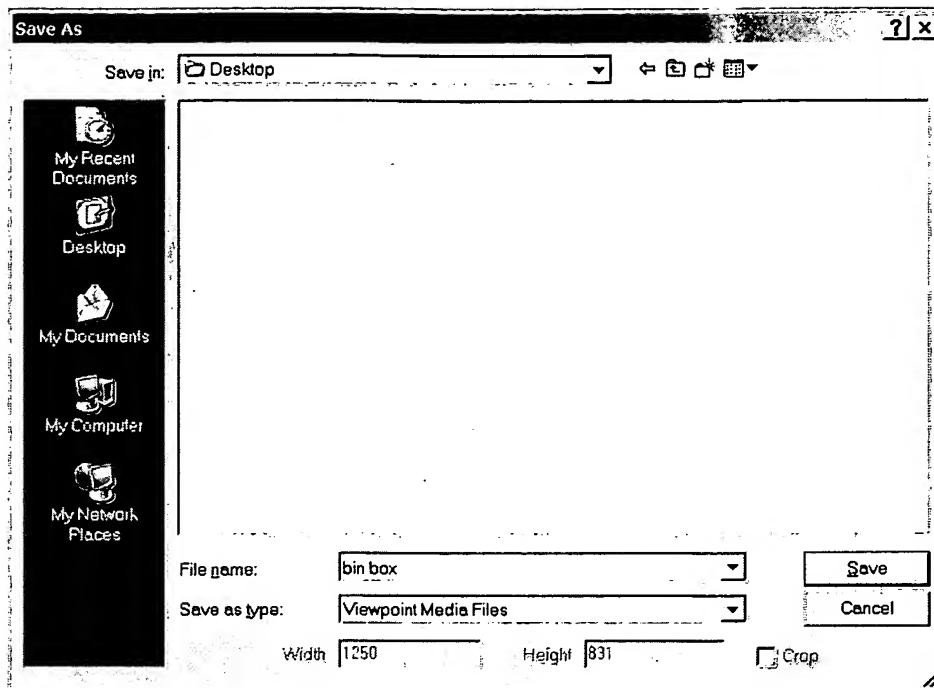


Increasing the width and height will make a larger area within the browser, but should be done with caution, as some recipients of the Viewpoint Media Files may have their resolution set to a low setting. It is not uncommon to find 800 x 600 pixels on many desktop computers. It is less common to find 1024 x 768 pixels. Check with the recipient to confirm individual resolution settings. Satisfactory results may be achieved by leaving the default settings.

#### 5. Saving a Viewpoint Media File for HTML

Once the Score! X file has been opened and resized, the user may choose to add graphics to the file, or merely keep the bleach white and kraft appearance of the plain file. Whichever is decided, a 3-D Viewpoint Media File can be created to send to a client or end user. To do so, start by going to the 3-D tab and rotating the view to the desired starting position.

Next, go to *File* → *Save As* and choose Viewpoint Media Files from the drop-down list. Give the file a name and choose a *Save In* directory. Then click on the *Save* button.



Five files will be created in this location and all of them are necessary to view the file in a Web browser. In this example, the filename was "bin box." After pressing Save, the following files were created:

- Bin box.html
- Bin box.mts
- Bin box.mtx
- Bin box.png
- MTS3Interface.js

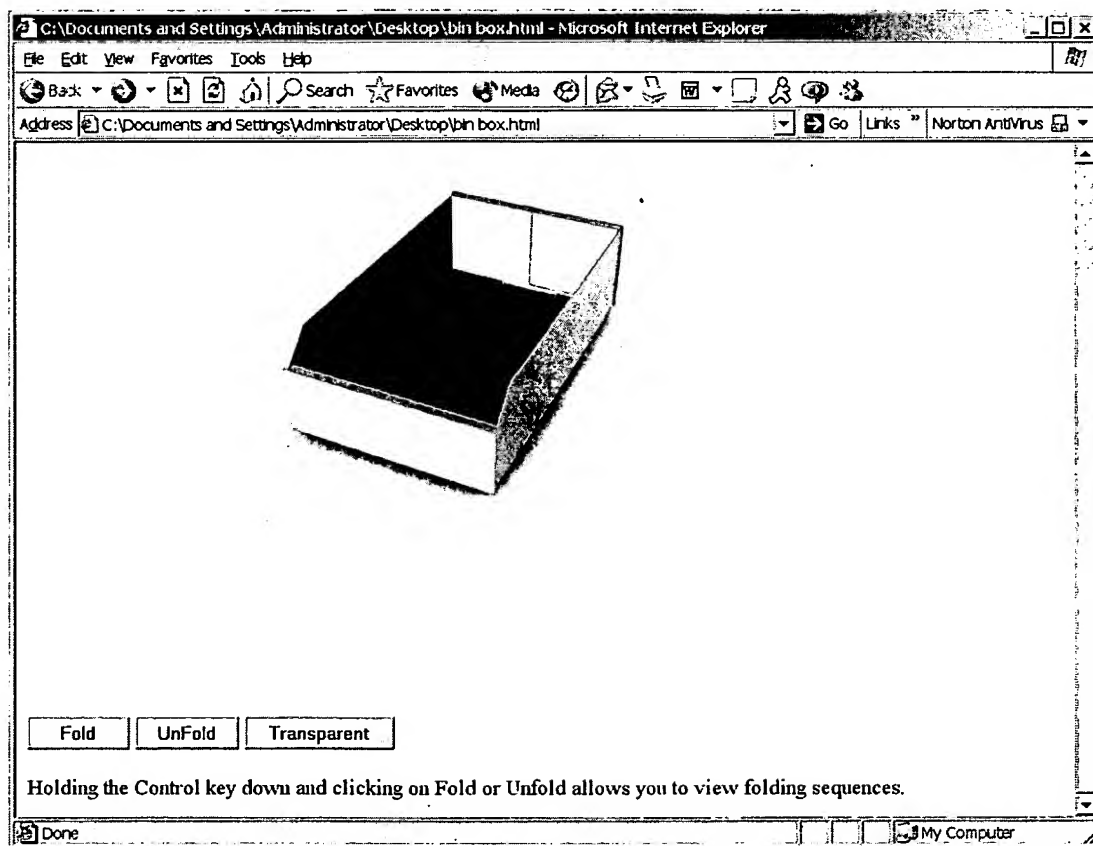
By double-clicking on the file "Bin box.html," the default Web browser will launch, and the Viewpoint scene will appear.

## First Time Viewpoint Users...

If Viewpoint has never been run on the Web browser, and the browser is connected to the internet, two different things may occur.

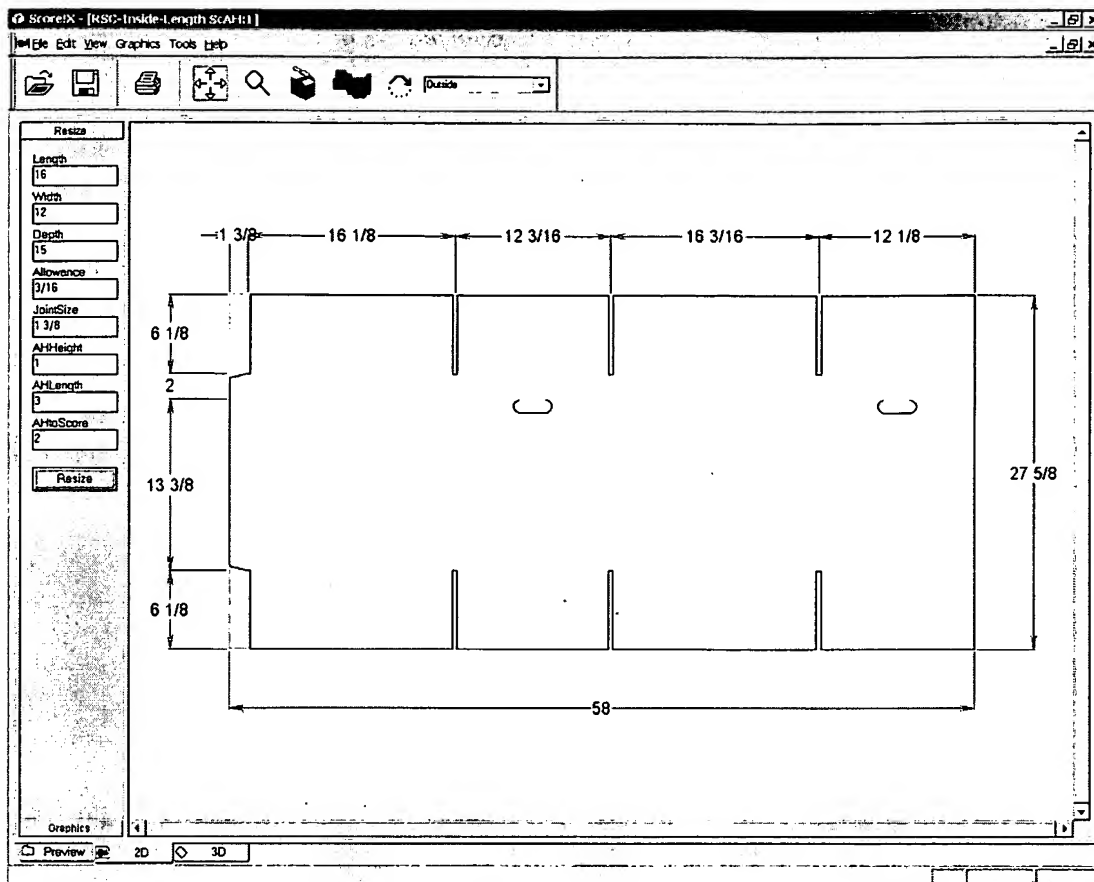
The first and nicest result will be a message stating that the Viewpoint Media Player is automatically downloading, and when complete, the file will appear.

The second result will be a message stating that the Viewpoint Media Player is not installed. If that is the case, point the browser to <http://www.viewpoint.com/> and click on the link that says, "Download Player." After this is done, go back and open the original html file that was launched by double-clicking. The file will appear.

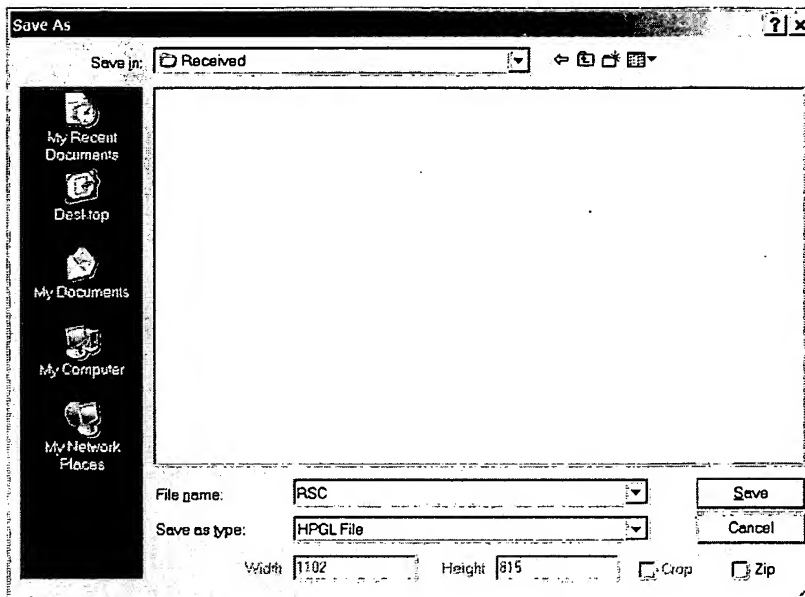


## 6. Saving a Score! X HPGL File for Sample Tables

In order to send a Score! X file to the samplemaker as an HPGL file, first open a standard from the library and resize the file.



Next, select *File* → *Save As*. Browse to the shared Table folder, and choose HPGL as file type and a file name. Click on *Save*.



The HPGL file is ready to cut.

## **System Requirements**

- Windows 98, WinNT, Win2000, WinME, or WinXP
- 24 Mb of Free Hard Drive Space
- 256 Mb RAM
- 16-Bit Color